AUGUST
1957

fueloil & oil heat

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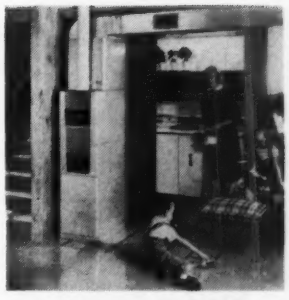
35 Years devoted to Progress in Oilheating and Airconditioning

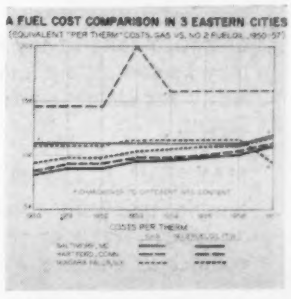
Equipment Selling is the Key

Healthy Growth for Fueloil depends on Someone selling Burners and Units 45



Tale of three Cities

Depth Interviews in three Markets point the Way to marketing Success 47



Here Equipment outsells Oil

After starting in Fueloil, Jacksonville Dealer finds Profits in Heating and Cooling 50

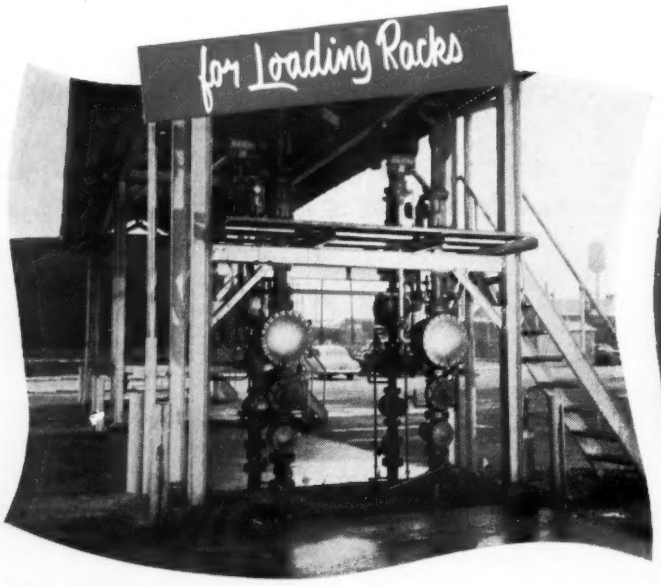
Liquid heating-cooling Primer describes combinations used with boiler Heating 58

YOU CAN MAKE THIS A MORE PROFITABLE FUEL OIL SEASON

with

BRODIE *BiRotor* METERS

In the busy fuel oil season, your men and equipment can handle more business through faster loading, deliveries and accounting with Brodie *BiRotor* Meters on loading racks and tank trucks. There's more profit, too, with accurate control and records of every fuel oil transfer, without spillage or short delivery losses. The sustained accuracy, ruggedness, and low maintenance of *BiRotors* are proved through years of performance. For the Brodie Metering Equipment tailored to your exact needs, consult the Brodie Metering Specialist—as near as your phone.



INSTALL IN ANY POSITION

Brodie Loading Rack Meters may be installed vertically or horizontally at any point in line or loading arm, and may be completely line supported. This allows full flexibility for simplest possible installation with any piping layout.

MAXIMUM ACCESSIBILITY

Simple unit-built assemblies permit easy inspection, cleaning, service or replacement of measuring element, counter or adjustor without disturbing line connections.

FOR EVERY LOADING RACK REQUIREMENT

There's a *BiRotor* Meter for every capacity, with easy reading Brodimatic Counters, Printers, Quantrols, or Remote Counters and Controls to meet all loading rack needs.

FLEXIBILITY OF INSTALLATION

Brodie Tank Truck Meters are designed so that inlet, outlet and counter may face in virtually any direction to allow simplest piping arrangement and efficient use of cabinet space.

COMPACT, ACCESSIBLE

Complete Meter and Strainer-Air Eliminator are comprised of simple, interchangeable unit-built assemblies which can be inspected or serviced without disturbing line connections.

FULL RANGE OF TYPES AND CAPACITIES

Capacities from 60 to 150 gpm, for pump or gravity operation. Choice of counters: Brodimatic, Brodimatic Printer, Brodimatic Quantrol for automatic quantity control, and space saving "G" Counters.

BRODIE BiRotor METERS

ALL-STEEL TRUE-ROTARY

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REPRESENTATIVES WITH STOCKS AND SERVICE FACILITIES IN ALL PRINCIPAL CITIES

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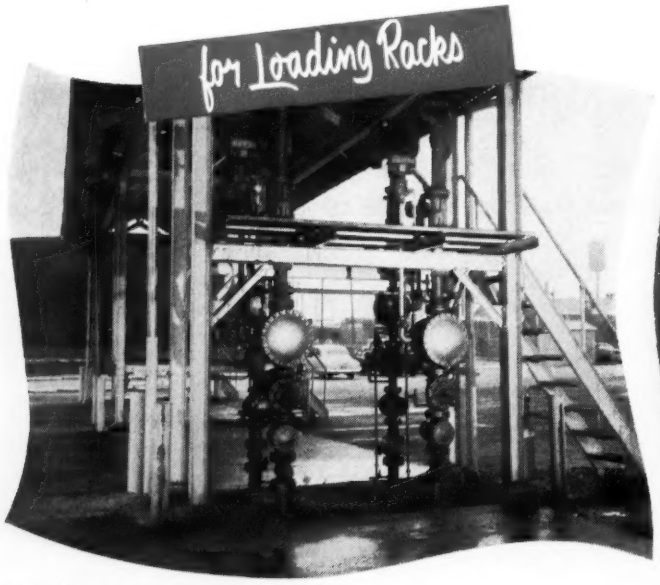

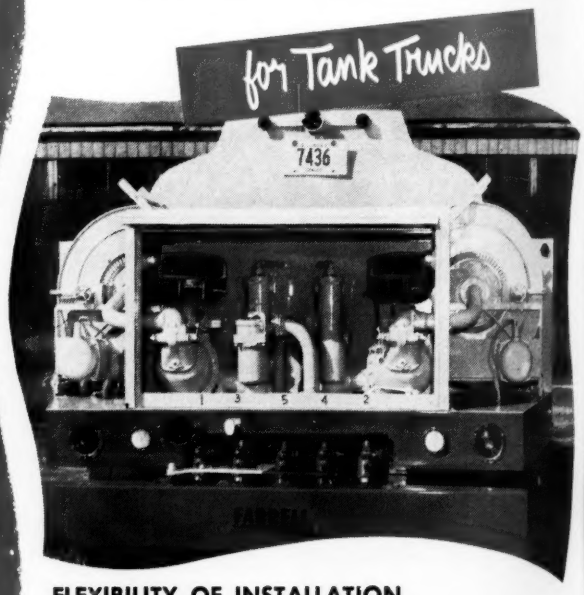

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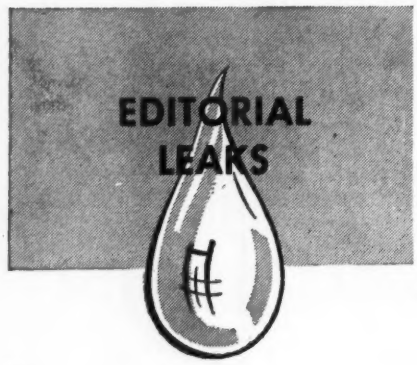

IN THE LAST ISSUE, we promised you that we'd just take one shot at the general subject of our 35 years antiquity, both the industry and the magazine, but we've changed our minds . . . only slightly. The most informative of the historic articles in the July issue was by Louise Becker who had been quite active in the early years of the industry, and here are four more of her comments:

OBSERVANCE of our 35th birthday has given us an opportunity to thumb through early issues of *Fuel Oil for Heat and Power* without the feeling that we were squandering the boss' time. One item, as timely today as it was when it appeared in the November 1924 issue, reports that the Tulsa Oklahoma Board of Education voted to install oilburners in the city's public school buildings. Natural gas had been used for several years, it noted, but an architect's report showed that a saving of 25-50% over previous gas heating costs could be made by a switch to oil. Shucks, times don't change much, do they?

WE had assumed that the tendency of Russians to claim credit for all important inventions was a present-day bid for importance. However, in an article in the October 1924 issue of *Fuel Oil for Heat and Power,* entitled "Glimpses Into the History of Oil Burning," the author states: "It was in Russia, a country generally acknowledged to be backward in many ways, that many of the first oilburning devices appeared. A mechanic, named Werner, employed in a Russian refinery is credited with having first suggested burning refuse oil for heat and power. In 1861 he experimented with numerous devices and ultimately settled upon a contrivance consisting of a series of grids or grates over which oil trickled and burned." That name Werner puzzles us—doesn't sound a bit Russian.

WHILE WE'VE spanned the years from bustles to plunging necklines, and seen many mighty important changes, we're frequently reminded that one thing that doesn't change much is the lack of interest of most major oil companies in the oilburning industry that continues to provide a great share of the handsome profits they point to with considerable pride. We've been browsing through *The Lamp,* the company publication of the Standard Oil Company (N. J.). Jersey Standard is celebrating its 75th anniversary this year and this issue of *The Lamp* memorializes that event.

A handsome issue it is too, recording in picture and text the progress and development of that mighty corporation. Yet, in all 80 pages of this issue we find only one small mention of fueloil or oilburners. On page 43, among the listed uses of petroleum products by householders, it says: "Basement; an oilburning furnace, asphalt waterproofing floor tile, expansion joint fillers in the foundation." True to form—fueloil right in there with the less important miscellaneous products!

BUT WE aren't going to give up hope despite 35 years of slighting. We noted our June issue of *Merchandising News* carried an item saying that George Schoenbaum had been named head of a newly-created "Home Heating Oil Section" in the Marketing Coordinating Department of the Standard Oil Company (N. J.), and that the purpose of this new section is to promote the use of oil for comfort heating throughout the world.

Okay, we'll let bygones be bygones, fellows. But couldn't you do just a teensy bit of that promoting in the United States maybe, as recompense for this profitable market the oilburner industry has practically forced upon you? Good luck, George—we'll be glad to lend an experienced helping hand. We well know what you are up against.

BRINGING THIS PAGE back into the office we wish we had been able to write a headline for a news item about a rather explosive incident in Westchester County last month. We would have called it "Atomic Expert atomized by Neighbor's Gas."

The news item sent to us carried a date line from Hartsdale, N. Y., explaining that the new home of Donald Henderson was destroyed by a basement gas explosion. Mr. Henderson is an atomic power specialist for the General Electric Co. at its New York offices.

The interesting phase of this tragic event was that Mr. Henderson heats his home by oil. A workman digging in the ground out front broke a gas service line causing gas to leak into the cellar of the house, and this was ignited by the oilburner. Fortunately all members of the family were away because the house was demolished with $30,000 damage.

THERE'S BEEN a lot of industry comment and activity, you might even call it agitation, over the current use of Type B flues in new homes, thus limiting them to gas heating.

We have maintained that a builder could well afford to spend the modest extra cost of a Type A flue which would facilitate the use of any fuel. No one knows what the future holds in the possible interruptions to fuel supply. An intelligent builder might well merchandise the fact, putting a lot of emphasis on the all-purpose chimney that he provides.

The subject comes to mind right now while looking over a price list. One prominent manufacturer who makes both types of flues shows the list price for a typical Type A flue at $64.80. His Type B flue to fit a similar house lists at $22.05. The difference in list prices is $42.75. However, a builder of any size would get fully 40% off the list for a net difference of $25.65.

Surely a smart sales force could capitalize on the advantages of the all-fuel chimney at this price.

the original and dependable
WHISTLING TANK FILL SIGNAL

SCULLY SIGNAL COMPANY
174 Green Street, Melrose 76, Mass.

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Dealers - Jobbers!

Get That "EXTRA" Volume and Profit with the

Tattle-Tale
TRADEMARK

• Dot 7-C Oil Tank Gauge
for 1½" and 2" openings

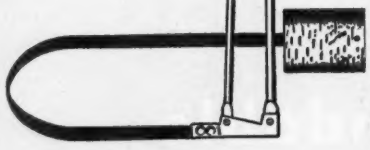
7 *Ways* BETTER

Write For Free Sample and See For Yourself

Dealers and Jobbers have been Reordering — even from Belgium, Denmark and other Foreign Countries.

This Trouble-Free Tank Gauge is Really Selling.

There Must be a Reason.



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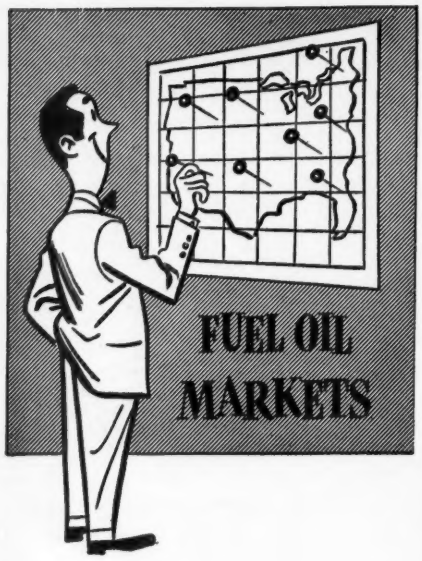


DISTILLATE heating oil prices continue very irregular, mostly on the down side in the areas east of the Rockies. Excessive stocks at primary levels are largely responsible. At press time, stocks were one-fifth higher than the previous year.

Refinery runs have been cut back, but the move came too late to handle the situation without a good many soft spots. It proved to be impossible to convince refiners in early spring that the combination of warm weather and a smaller new crop of oilburners would result in a season's demand lower than the year before.

Among the New England cities the declines ranged from .2¢ to .7¢. The Mid-Atlantic showed a pretty steady .2¢ tank car drop, but in several areas, the tank wagon price declined only .1¢ which increased the margins. The Southeastern markets had about the same experience.

Several Midwestern cities showed the declines ranging from .25 to .5 at wholesale levels, but retail prices were up .2¢ showing margins considerably improved. The West Coast picture showed increases at both industry levels in all principal markets indicating that the supply situation was well controlled by the refiners.

One of the best observations in the surplus distillate picture east of the Rockies is that while prices have declined, the drops have been relatively modest and there's been no indication of a runaway market. In the gasoline phase of the industry, any considerable surpluses nearly always result in bad price cutting leading in some areas to real price wars with declines of several cents a gallon.

The obvious reason is that gasoline marketing is so much more visible to the public than is fueloil. Service station operators worry far more about competitive antics in a neighborhood than fueloil men ever do.

Department managers for fueloil in major companies are quite concerned because of the supply and price situation, but they should be informed that they are doing a far better job than their friends across the hall who are really sweating it out in gasoline.

Distillate Fueloils

PRIMARY STOCKS*
(Thousands of Barrels)
East of Rockies

	July 12 1957	*July 13 1956*
East Coast	46,025	34,292
Midwest	36,849	31,867
Gulf Coast	25,802	24,719
Total	108,676	90,878

*American Petroleum Institute.

No. 2 Heating Oil (Including No. 3 & PS200)

Price per gallon as of 7-15-57

	Tank Car	*Tank Wagon*		*Tank Car*	*Tank Wagon*
Portland, Me.	11.6(A)	15.3	Richmond	11.8(A)	15.3
Boston	11.5(A)	15.6	Charleston, S. C.	11.4(A)	14.5
Providence	11.5(A)	15.5	Chicago	11.0(A)*	14.6
Springfield, Mass.	11.75(A)	15.5	Detroit	12.25*	16.4
Hartford	11.75(A)	15.5	Cleveland	12.1*	15.3
New Haven	11.4(A)	15.2	Minneapolis	10.375	15.5
Syracuse	12.40(A)	15.7	St. Louis	11.5(A)*	15.1
Albany	11.6(A)	15.5	Indianapolis	11.3*	15.8
New York	11.4(A)	15.5	Milwaukee	12.35*	15.5
Newark	11.4(A)	15.1	Des Moines	10.50	15.1
Philadelphia	11.4(A)	14.9	Sas Francisco	11.95*	14.5
Harrisburg	11.4(A)	15.5	Portland, Ore.	12.65*	15.2
Baltimore	11.4(A)	15.2	Seattle	12.65*	15.3
Wilmington, N. C.	11.4(A)	14.9	Spokane	14.35*	17.2
Washington	11.4(A)	15.6	Los Angeles	11.45*	14.0

*Delivered.
Tank wagon prices shown are for maximum one-time delivery discounts.
(A) Price subject to .5¢ a Gal. Vol. Discount.

NEW MOTOROLA T-POWER 2-WAY RADIO

Transistorized Power Supply for both receiver and 25-watt transmitter

Long Life Transistors Replace the Vibrator . . .
Reduce Maintenance and "Down-Time"

Already famous for the lowest maintenance and operating costs in the 2-way mobile radio field, Motorola mobile radio is an even better investment now—with the T-POWER unit. The vibrator is gone! . . . replaced by rugged long-life transistors. Gone, too, is the problem of frequent vibrator replacement. Here is a mobile radio with an all-electronic power supply.

New Mounting Flexibility with Plug-In Control Head
. . . Same Basic Unit can be Used for Front or Trunk Mounting

With the T-POWER radio, you are no longer restricted to one type of mounting. Install the complete radio, with drawer unit and plug-in control head, for under-dash mounting. For rear mounting the same basic drawer unit can be installed in the trunk and connected by cable to a dash-mounted control head. And—the same basic drawer unit can be interchanged with the equivalent Motorola Twin-V trunk mount radio models operated from a 12-volt negative ground source.

T-POWER radio is another example of Motorola's continuing leadership in the practical application of transistors in mobile radio. Other tested and proved transistorized products include the Dynamic Microphone and Power Voice Speaker.

Get all the facts.—Write now for literature with complete information.

MOTOROLA Communications & Electronics, Inc. • 4501 Augusta Blvd., Chicago 51, Illinois • A Subsidiary of Motorola Inc.

Oilheating Trends

INSTALLATIONS of domestic oilheating equipment for the month of June are estimated at 36,779 which is 11% below the 41,671 installed in the same month of last year. For the full six months of the year's first half, estimated installations were 230,275 or 14% below the 269,482 in the same period of 1956.

Factory shipments to the end of April, the latest available data, show a drop of only 8.5%. The apparent reason for the wide difference in the two percentages would be that last year the installations in the first half were better than the normal pattern compared to the year as a whole. This was shown in the January, 1957 issue of FUELOIL & OIL HEAT. This year will apparently be more nearly normal.

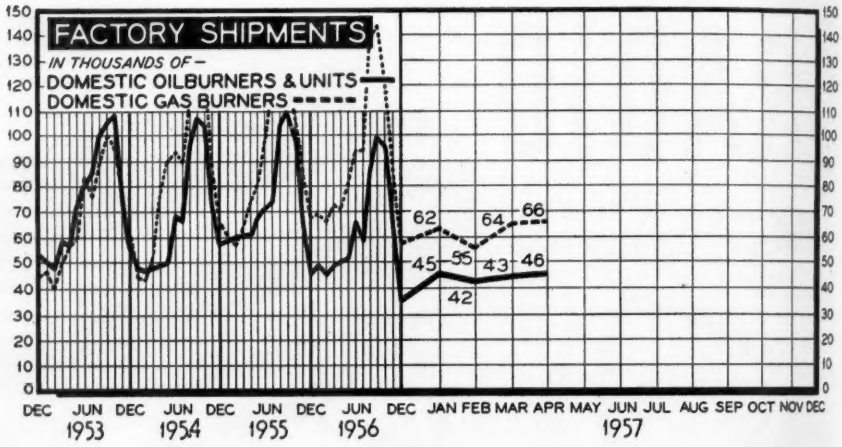
That brings up the interesting point that the mid-year figure is a fair index to the year as a whole. During the past ten years, the first half of the year averaged 33.9% of the full year's installations. The pre-war average on this was 33.5%.

If the first half of this year follows the typical pattern of being one-third of the whole year we can expect about 690,000 total installations. Factory shipments run larger due to exports.

The June installations by types were: New Homes, 11,697; Replacements of old oilheating equipment, 9,980; Conversions from other fuels, 15,102. For the entire six months the division was: New Homes, 80,087; Replacements, 62,100; and Conversions, 88,088.

Burner Stocks: At the end of June dealers had in stock approximately 89,771 domestic oilburners and units compared with 99,823 the previous month, and with 113,657 the previous year. The June 30 stocks were divided: Separate burners, 45,372; Boiler-burner units, 19,355; Furnace-burner units, 25,044.

Tank Stocks: At the end of June, dealers had on hand approximately 48,679 customer oil tanks, this compared with 67,735 the previous month, and 62,850 the previous year. This lower inventory level indicates uncertainty by the dealers over the outlook since we use the oil tank as the barometer of inventory attitude. The average price paid for a 275 gal. basement tank by dealers in June was $33.

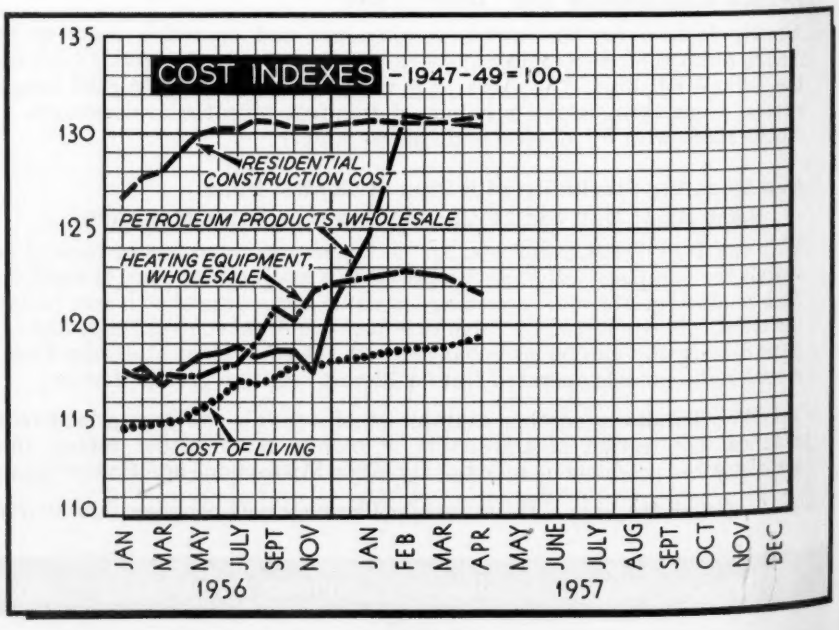


Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 145 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	APRIL			FOUR MONTHS		
	1957	1956	Percent Change	1957	1956	Percent Change
Separate Burners	31,309	33,000	— 5.1	118,104	125,963	— 6.2
Boiler Units	5,253	4,244	+23.8	18,198	17,439	+ 4.4
Furnace Units	9,223	13,197	—30.1	39,244	48,390	—18.9
All Domestic	45,785	50,441	— 9.2	175,546	191,792	— 8.5
Commercial	3,459	3,025	+14.3	13,863	11,509	+20.5
Total	49,244	53,466	— 7.9	189,409	203,301	— 6.8


COST INDEXES – 1947-49 = 100
RESIDENTIAL CONSTRUCTION COST
PETROLEUM PRODUCTS, WHOLESALE
HEATING EQUIPMENT, WHOLESALE
COST OF LIVING
JAN MAR MAY JULY SEPT NOV JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
1956 1957

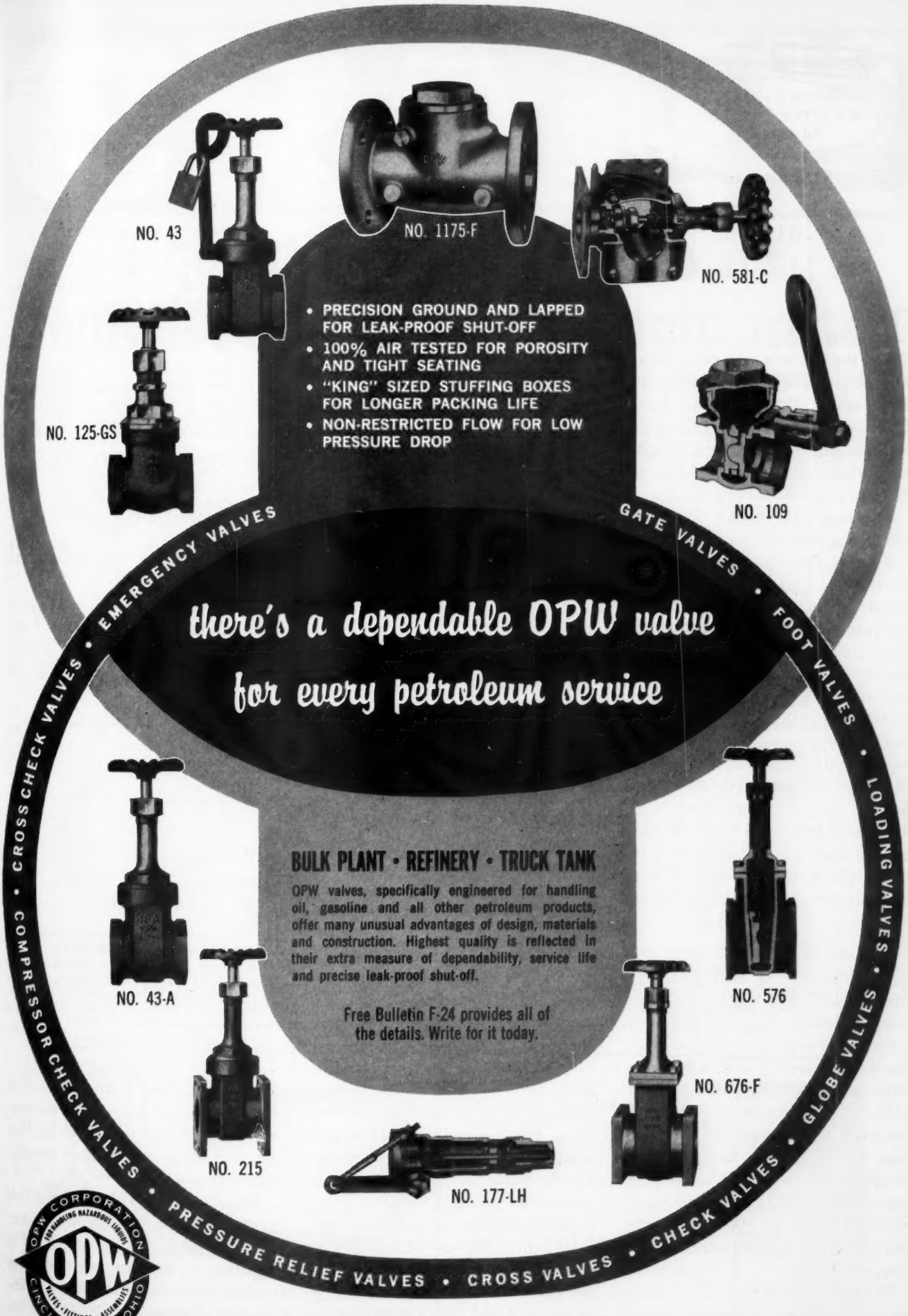
Minimum Retail Prices of Key Dealers

	June Avg.	May Avg.
Separate Burners	$313	$312
Boiler-Burners	730	730
Furnace-Burners	612	617

Price Index: Separate Burners 1947-49 is 100%

WHOLESALE			
June	94.5	Six months ago	95.1
May	94.6	Year ago	93.5

RETAIL			
June	92.5	Six months ago	93.1
May	92.5	Year ago	92.1


NO. 43
NO. 1175-F
NO. 581-C
• PRECISION GROUND AND LAPPED FOR LEAK-PROOF SHUT-OFF
• 100% AIR TESTED FOR POROSITY AND TIGHT SEATING
• "KING" SIZED STUFFING BOXES FOR LONGER PACKING LIFE
• NON-RESTRICTED FLOW FOR LOW PRESSURE DROP
NO. 125-GS
NO. 109
there's a dependable OPW valve for every petroleum service
EMERGENCY VALVES • CROSS CHECK VALVES • COMPRESSOR CHECK VALVES • PRESSURE RELIEF VALVES • CROSS VALVES • CHECK VALVES • GLOBE VALVES • LOADING VALVES • FOOT VALVES • GATE VALVES •
BULK PLANT • REFINERY • TRUCK TANK
OPW valves, specifically engineered for handling oil, gasoline and all other petroleum products, offer many unusual advantages of design, materials and construction. Highest quality is reflected in their extra measure of dependability, service life and precise leak-proof shut-off.
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VALVES • FITTINGS • ASSEMBLIES
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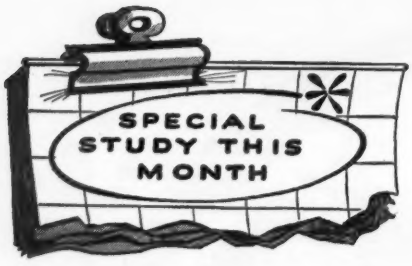
OPW CORPORATION 2735 COLERAIN AVE. CINCINNATI 25, OHIO Kirby 1-5400



Outlook at Mid-Year

THE DEALERS in our regular monthly reporting group found that in the first half year of the year, their own oilheating installations were down nearly 15% from last year. There was considerable geographic variation with New England off 8%, Mid-Atlantic states off 16%, Midwest off 17%, and the Far West off 21%.

The next topic in this discussion had to do with the general pricing practice of the dealer on his equipment. We found 37% of them had higher typical prices compared with last year. Then we found 17% with lower pricing than last year and the remaining 46% with the pricing this year the same as last. Those dealers that had generally raised or reduced their prices gave us percentages so that we were able to calculate the over-all impact on pricing of the entire list. Taking into account those who did change prices and those who did not, we found an over-all increase of 1.3% which checks pretty closely with our own price reporting and our indexes.

Sales Push

As a measure of sales push this summer we asked the dealers how many salesmen they now have on equipment compared with last year. Among all reporting dealers 9% have more salesmen than a year ago while 15% have fewer men than they did last summer. The other 76% have the same number of men as a year ago. A check on the over-all number of men employed by the group both years shows that there are 5% fewer equipment salesmen on the street this summer.

When we asked how they expect the entire year to turn out on equipment sales, the composite answer is 14.9% below the year 1956. This is about the same total answer that they gave on their sales for the first six months. The individual dealer sales do not follow the parallel. For example in running down the list here's a dealer whose sales are down 40%, but he expects the year as a whole to be up 5%. Some go the other way.

The significant thing is that they even out at the end of the columns to show the same forecast percentage as their historic pattern in the first half.

Among those companies selling both fueloil and oilheating equipment we learn that 33% of their new fueloil accounts this year have come through their own sales of new installations. The highest point on this is Mid-Atlantic states with 40%, and the lowest is the Pacific Northwest with 17%.

New Homes down

With new home sales down this year, there is some feeling that the competitive fuel gas has lost ground. This is obviously true because the factory figures show a decided decline. At the same time most of the dealers believe that gas will outsell oilheating in 1957. We find just two-thirds of the reporting dealers saying that more gas will be installed in their markets than will oil heat. The next 20% of the dealers say the situation will about balance, while 13% say that oil will substantially out-sell gas in their communities. This is probably a pretty accurate picture when you consider that these reports come from a good many states over the country.

Next we asked the fueloil dealers on the list how their own profit picture seems for 1957 compared with last year. The question actually was pointed at whether operating expenses have increased as much as margins. In the tally we found 49% expecting profits the same as last year, 30% believing they will make more on oil this year; and 21% expecting to make less. On the whole the outlook then, is a little on the plus side.

The final question this month had to do with fueloil and oilheating dealers selling central airconditioning in residences. In the entire reporting group we found that 30% sold it in 1956 and they sold an average of 10 installations. Among the same lot of dealers 42% are selling airconditioning this year and they estimate that they will sell an average of 16 installations this year.

Dealers made these comments this month: "We're planning to sell airconditioning next season, and we're initiating a vigorous modernization package plan this month." . . . "Increase of equipment and material costs broadens the difference between oil

Oilheating Permits*

JUNE 1957		6 MONTHS' 1956	TOTAL 1957
2	Albany, N. Y.	19	14
21	Baltimore, Md.	215	104
83	Bridgeport, Conn.	463	420
0	Columbus, O.	10	13
..	Detroit, Mich.	758	..
51	Elizabeth, N. J.	356	197
28	Freeport, N. Y.	172	158
..	Hartford, Conn.	281	..
15	Irvington, N. J.	158	73
29	Meriden, Conn.	252	230
31	Milwaukee, Wis.	882	186
14	Minneapolis, Minn.	81	75
15	Montclair, N. J.	59	69
7	Morristown, N. J.	18	22
40	Mt. Vernon, N. Y.	111	203
..	Newark, N. J.	460	..
144	New Bedford, Mass.	563	453
21	New Haven, Conn.	96	108
..	New Rochelle, N. Y.	101	..
13	Norfolk, Va.	280	143
12	Omaha, Neb.	39	61
4	Orange, N. J.	50	34
9	Passaic, N. J.	38	41
21	Paterson, N. J.	191	123
103	Philadelphia, Pa.**	1233	814
37	Portland, Me.	263	223
145	Portland, Ore.	1523	829
7	Poughkeepsie, N. Y.	67	41
33	Providence, R. I.	313	..
24	Richmond, Va.	221	176
112	Roanoke, Va.	495	396
63	Rochester, N. Y.	393	305
5	Rockville Center, N. Y.	57	31
31	Salem, Mass.	218	136
..	St. Louis, Mo.	909	..
8	St. Paul, Minn.	41	37
5	Schenectady, N. Y.	35	12
..	Spokane, Wash.	332	..
80	Springfield, Mass.	550	405
22	Stamford, Conn.	145	128
28	Washington, D. C.	216	164
10	White Plains, N. Y.	93	64
27	Wilmington, Del.	135	84
63	Worcester, Mass.	455	437
25	Yonkers, N. Y.	128	209
1388	Totals	9928	7218
	Percent Change		—27.4

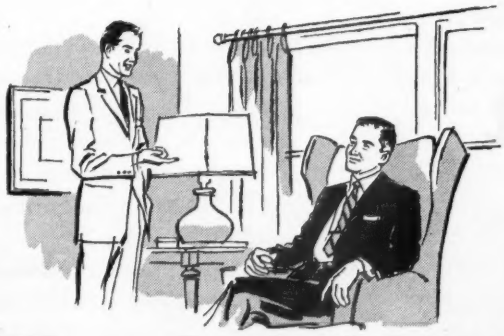
*Pemits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

**Courtesy of "Philadelphia Inquirer."

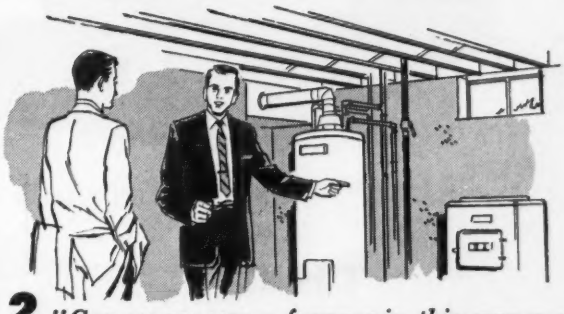
CRANE

5 questions your warm air remodeling prospects might raise

(Sunnyland gives you the easy answers!)



1 *"With a new Crane Sunnyland furnace can I use any type of fuel?"* You certainly can. There are Sunnyland furnaces for every fuel—all gases, fuel oil and coal. (They use less, too.)



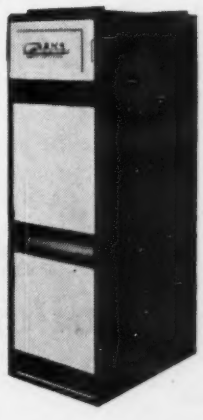
2 *"Can we squeeze a furnace in this corner of the basement?"* There's no squeezing necessary! All Crane Sunnyland hi-boy, counterflow, and basement furnaces are compact, take up little floor space. Yet they produce plenty of warm air.

3 *"I've heard about the new horizontal model furnaces. Could you install one here?"* Sure. Sunnyland horizontal models are designed for crawl spaces and attics. Or they can be suspended from your basement or utility room ceiling.

4 *"We can't quite swing air conditioning now. Suppose we want to add it later?"* No problem. Simply add a Sunnyland cooling coil with remote condensing unit to your Sunnyland furnace. (Or to your present forced warm air furnace.)

5 *"I see you sell Crane Sunnyland. Is that the Crane that's so famous for quality plumbing and heating?"* The very same. The company that has meant dependability to so many people for over 100 years.

Why not find out the many ways Crane helps you sell the big remodeling market? Get in touch with your Crane Branch or Crane Wholesaler now.

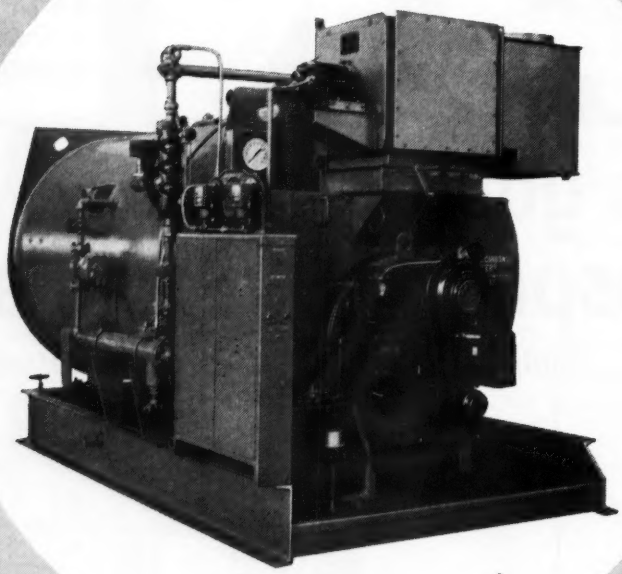


CRANE CO.

836 South Michigan Avenue,
Chicago 5

VALVES • FITTINGS • PIPE • PLUMBING
KITCHENS • HEATING
AIR CONDITIONING

Complete, Coordinated, Compact Construction



THE *Fitzgibbons* PACKAGED BOILER UNIT

For detailed information about this boiler — catalog sheets, brochures, and specifications — write today to the Fitzgibbons Boiler Company, address below.

Full wet back construction provides complete water jacketing of the entire rear combustion chamber. There are *no* refractory arches or walls to deteriorate and replace. Fitzgibbons has always pioneered this design.

Sizes up to 464 horsepower for oil or gas firing are available. *All* units are *factory tested* before shipment.

This is a complete unit — a "Scotch" type steel boiler with burner, fully automatic controls and safety devices, and the induced draft fan for cleaner, quieter operation at high efficiency without a stack.

Domestic hot water supply for any purpose is constantly and effectively furnished through the famous Fitzgibbons "Tanksaver"® — a finned, copper coil submerged in the boiler where the water is the hottest.

Select the unit backed by the name "FITZGIBBONS."

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SINCE 1886 — MOST ECONOMICAL IN FUEL — THE FITZGIBBONS BOILER — 1886

PB118

and gas; this in turn is increasing gas equipment sales." . . .

"We are spending all our time and effort on airconditioning this month." . . . "Sales of oilheating equipment are declining." . . . "Gas prices much cheaper in our area; it's an uphill battle just to hold our own." . . . "New home sales off so that we must look to the old home and industrial market for sales." . . .

"Business is there if you go after it." . . . "Our oilheating equipment sales will be up by 20% over 1956 because of better trained salespeople, better credit terms, and more advertising." . . .

"The industry should point its advertising to educate the public to replace—zone—modernize their heating plants; the customer today thinks his heating is real modern if he installs an automatic boiler-burner to an old steam system." . . .

"Gross profits are down locally in burners and petroleum products because of gas burner sales and an oversaturation of dealers fighting to stay in business." . . . "Airconditioning is really picking up due to the early and persisting heat wave." . . .

"A margin change is absolutely necessary if we are to maintain equipment, ever increasing labor costs, etc., makes it look as though another inflationary trend is underway." . . . "Labor problems are still paramount." . . . "Electric heat has really hurt in this city." . . .

"We have a very good builder prospect for seven complete airconditioning jobs; I believe there will be an increasing demand for cooling in central systems." . . . "There are more families feeding from the fruits of oil sales than from the sales of natural gas—how sleepy can our Congressmen get?"

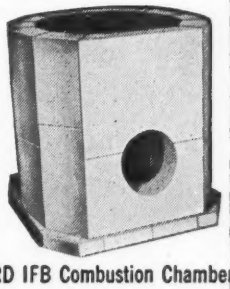
❖

Robert E. Ehalt and *Donald L. Sanders* have been named district representatives, Gorman-Rupp Co., Mansfield, O. Ehalt's territory will include Ohio, West Virginia, Virginia, Pennsylvania, New York and parts of Kentucky while Sanders' territory will extend from Metropolitan New York through eastern Virginia.

Make money on every job

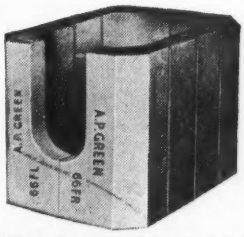
with these A. P. GREEN... Combustion chambers

QUICK-EASY TO INSTALL



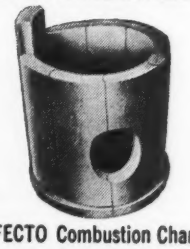
STANDARD IFB Combustion Chamber

ASSURE EFFICIENT OPERATION



STREAMLINED Combustion Chamber

COST NO MORE THAN ORDINARY CHAMBERS



PERFECTO Combustion Chamber

SIZES TO MEET EVERY OIL BURNER REQUIREMENT

OIL BURNER Baffle Brick

HIGH TEMPERATURE Insulations

STANDARD IFB Combustion Chamber

Requires minimum installation time. Front tile is in two pieces with burner opening already cut. Packed in special container that guards against breakage in shipment. Everything you need is in the carton, including a 5-lb. can of 'SAIRSET high temperature mortar.

STREAMLINED Combustion Chamber

Conforms to the natural shape of the flame and eliminates "dead corners." Provides more quiet operation. The ease of installation makes the installed cost of a STREAMLINED Chamber no more than that of an ordinary type of chamber. 5-lb. can of 'SAIRSET included in specially designed protective package.

PERFECTO Combustion Chamber

A practical, economical solution to many oil conversion problems. Installation is simple. For both round and elongated chambers, four basic tile shapes are used to form chamber sizes to fit nearly every type of domestic furnace or boiler.

OIL BURNER Baffle Brick

The baffle is installed in such a manner that it rests on the combustion chamber and directs furnace gases to all heating surfaces. Results in more economical and efficient performance by reducing the waste heat up the stack.

HIGH TEMPERATURE Insulations

These A. P. GREEN High Temperature insulations help insure the efficiency of the oil burner installation.

Order from Your A. P. GREEN Distributor; he's listed in the yellow pages of your telephone directory, or write direct

A. P. GREEN FIRE BRICK CO.
Mexico, Missouri, U.S.A.

PLANTS: Mexico, Mo.—Woodbridge, N. J.—Sulphur Springs, Texas—Jackson, Oak Hill, South Webster, Ohio—Philadelphia, Pa.—Troy, Idaho

IN CANADA: A. P. GREEN FIRE BRICK CO., LTD.
Toronto 15, Ontario

A. P. Green REFRACTORY PRODUCTS

DISTRIBUTORS IN THE PRINCIPAL CITIES OF THE WORLD

Where is the new home Market?

	No. of Permits Issued	
	April 1957	4 Mos. 1957
ALABAMA	1,181	4,051
Birmingham area	407	1,400
Mobile area	270	1,045
Montgomery area	91	276
Nonmetropolitan areas	413	1,330
ARIZONA	1,465	5,148
Phoenix area	1,004	3,557
Nonmetropolitan areas	461	1,591
ARKANSA	319	873
CALIFORNIA	17,071	58,469
Fresno area	220	1,000
Los Angeles area	7,852	29,344
Sacramento area	513	7,414
San Bernardino area	1,996	6,822
San Diego area	1,804	5,177
San Francisco-Oakland	1,837	5,585
San Jose area	1,202	3,895
Stockton area	136	457
Nonmetropolitan areas	1,511	4,775
COLORADO	1,098	4,350
Denver area	758	2,509
Nonmetropolitan areas	340	1,841
CONNECTICUT	1,543	4,262
Bridgeport area	254	582
Hartford area	348	940
New Haven area	123	394
Nonmetropolitan areas	818	2,346
DELAWARE	298	657
Wilmington area	296	641
Nonmetropolitan areas	2	16
DISTRICT OF COLUMBIA		
Washington, D. C.	227	592
Maryland suburbs*	603	1,918
Virginia suburbs**	658	1,475
FLORIDA	5,570	19,085
Jacksonville area	456	1,371
Miami area	1,576	4,983
Orlando area	204	816
Tampa-St. Petersburg area	1,174	4,389
Nonmetropolitan areas	2,160	7,526
GEORGIA	1,343	5,253
Atlanta area	754	2,662
Columbus area	189	588
Savannah area	87	859
Nonmetropolitan areas	313	1,144
IDAHO	134	326
ILLINOIS	4,411	14,680
Chicago area (Does not include Ind. suburbs)	3,673	12,641
St. Louis area	53	166
Nonmetropolitan areas	685	1,873
INDIANA	1,225	3,802
Chicago suburbs	299	600
Fort Wayne area	41	214
Indianapolis area	360	1,248
South Bend area	103	349
Nonmetropolitan areas	422	1,291
IOWA	709	1,750
Davenport area	100	261
Des Moines area	146	353
Nonmetropolitan areas	464	1,136
KANSAS	692	2,848
Kansas City area	156	554
Wichita area	292	636
Topeka area	62	993
Nonmetropolitan areas	182	665

*Included in Maryland state total.
**Included in Virginia state total.

	No. of Permits Issued	
	April 1957	4 Mos. 1957
KENTUCKY	669	1,881
Cincinnati suburbs	41	130
Louisville area	409	1,148
Nonmetropolitan areas	219	603
LOUISIANA	803	3,426
Baton-Rouge area	213	738
New Orleans area	275	1,665
Shreveport area	146	460
Nonmetropolitan areas	169	563
MAINE	176	297
MARYLAND	2,066	7,341
Baltimore area	1,150	4,515
Washington, D. C. suburbs	603	1,918
Nonmetropolitan areas	313	908
MASSACHUSETTS	1,855	5,180
Boston area	688	2,230
Springfield-Holyoke area	378	806
Worcester area	108	434
Nonmetropolitan areas	681	1,710
MICHIGAN	3,941	10,896
Detroit area	2,431	6,892
Flint area	250	620
Grand Rapids area	166	517
Nonmetropolitan areas	1,094	2,867
MINNESOTA	1,458	2,786
Minneapolis-St. Paul area	933	1,976
Nonmetropolitan areas	525	810
MISSISSIPPI	171	590
Jackson area	63	171
Nonmetropolitan areas	108	419
MISSOURI	857	3,580
Kansas City area	385	1,085
St. Louis area (Ill. suburbs listed under Ill.)	307	1,432
Nonmetropolitan areas	265	1,063
MONTANA	145	336
NEBRASKA	410	955
Lincoln area	84	228
Omaha area	252	507
Nonmetropolitan areas	74	220
NEVADA	284	661
NEW HAMPSHIRE	137	342
NEW JERSEY	3,166	8,809
Atlantic City area	61	161
New York City suburbs	2,026	5,153
Philadelphia suburbs	301	876
Nonmetropolitan areas	778	2,619
NEW MEXICO	446	1,785
NEW YORK	5,111	14,977
Albany, Schenectady, Troy	247	404
Buffalo area	721	1,883
New York City†	1,626	4,823
Suburbs of New York City	1,801	6,189
Rochester area	268	707
Nonmetropolitan areas	448	971
NORTH CAROLINA	828	2,812
Charlotte area	67	275
Greensboro-High Point area	113	431
Raleigh area	75	227
Nonmetropolitan areas	573	1,879
NORTH DAKOTA	135	213

†Covers dwelling units actually started.

	No. of Permits Issued	
	April 1957	4 Mos. 1957
OHIO	3,397	10,819
Akron area	271	769
Cincinnati area	477	1,600
Cleveland area	875	2,661
Columbus area	348	1,188
Dayton area	285	1,157
Toledo area	177	552
Youngstown area	252	853
Nonmetropolitan areas	712	2,039
OKLAHOMA	467	1,668
Oklahoma City area	198	640
Tulsa area	72	259
Nonmetropolitan areas	197	769
OREGON	496	1,629
Portland area	262	902
Nonmetropolitan areas	234	727
PENNSYLVANIA	3,002	8,675
Allentown-Bethlehem area	198	438
Harrisburg area	102	314
Phildadelphia area (See New Jersey for Jersey suburbs)	1,350	3,747
Pittsburgh area	773	2,610
Nonmetropolitan areas	579	1,566
RHODE ISLAND	277	702
Providence area	218	598
Nonmetropolitan areas	59	104
SOUTH CAROLINA	266	1,135
Charleston area	103	485
Nonmetropolitan areas	163	650
SOUTH DAKOTA	95	186
TENNESSEE	1,021	3,102
Chattanooga area	155	403
Knoxville area	256	668
Memphis area	326	1,174
Nashville area	169	485
Nonmetropolitan areas	115	372
TEXAS	5,081	19,304
Beaumont-Port Arthur area	188	635
Corpus Christi area	95	358
Dallas area	1,169	3,241
El Paso area	331	1,118
Fort Worth area	302	1,463
Houston area	996	5,305
San Antonio area	238	1,218
Nonmetropolitan areas	1,762	5,966
UTAH	503	1,750
Salt Lake City area	231	857
Nonmetropolitan areas	272	893
VERMONT	6	40
VIRGINIA	1,998	5,827
Portsmouth-Norfolk area	212	761
Richmond area	334	920
Roanoke area	106	384
Washington, D. C. suburbs	658	1,475
Nonmetropolitan areas	688	2,287
WASHINGTON	1,351	3,993
Seattle area	665	2,192
Spokane area	173	427
Tacoma area	120	455
Nonmetropolitan areas	393	919
WEST VIRGINIA	359	986
Charleston area	90	262
Nenmetropolitan areas	269	724
WISCONSIN	1,954	5,126
Madison area	171	388
Milwaukee area	817	2,606
Nonmetropolitan areas	966	2,132
WYOMING	44	149

"Don't forget this Field Control, lad. No heating plant works its best without one"

Every day, new-comers to the heating business are being taught an old lesson: That there is no substitute for good workmanship or good products. And for a score of years dealers have numbered Field Draft Controls among the products that are *good*, and for which there is no substitute. We are proud to have earned the good will of so many dealers for so many years.

You have put your faith in **field** *more than 15,000,000 times*

FIELD CONTROL DIVISION of H. D. CONKEY & COMPANY, MENDOTA, ILLINOIS

Affiliates: CONCO BUILDING PRODUCTS, INC. • Brick, Tile, Stone CONCO MATERIALS HANDLING DIVISION • Cranes, Hoists

REPRESENTED IN CANADA BY ONTOR LABORATORY LTD. 111 TYCOS DRIVE TORONTO 10, ONTARIO

by
Milburn Petty

WASHINGTON — The Eisenhower administration apparently is going to make another attempt at limiting oil imports on a "voluntary" basis before resorting to mandatory controls.

There is no indication now that any limits will be placed on imports of residual fueloil—only on crude oil imports.

But independent marketers—particularly on the eastern seaboard—are opposing any restrictions on imports of crude, contending that it will lead to higher prices for gasoline, fueloil and other products.

Control of crude imports, according to Senator Payne (R, Maine) would result in "a drastic fueloil price increase in home and industrial consuming areas of the nation."

Otis H. Ellis, general counsel for the National Oil Jobbers Council, predicted a 50-cent increase in crude prices within a year if crude imports are restricted.

Any oil marketer that thinks the next crude price increase will mean more margin for him is "dreaming," according to Ellis. He denied that import restriction would "stabilize" oil markets.

Gas Bill Passage Seen Likely

The odds now favor passage of the Harris Gas Bill by the House before adjournment this summer.

This legislation, to remove utility-type controls from producer prices for natural gas, came out of the House Commerce Committee, 15 to 13, with two oil-state members voting "No" (because they wanted complete exemption) but they will support it on the House floor.

The bill was substantially the same as introduced by Rep. Harris (D, Arkansas).

A whole series of amendments were beaten off, including the coal industry's proposal to regulate direct sales by pipelines to industrial plants which, it was contended, are generally "below cost."

House vote is expected to be close, with opponents contending that enactment of this bill means higher prices for gas consumers and proponents insisting that, without this legislation, there will be no incentive to find new reserves to meet mounting gas demands.

Meanwhile, a Chase bank official, L. F. Terry, estimates that present recoverable gas reserves represent 22 times the 1956 production but constitute only 20% of the "minimum" of 1,200 trillion cubic feet of the nation's future gas supply. In other words, he believes that 80% of the gas reserves are still undiscovered.

'Little Inch' to Move Oil Soon

Reconversion of the "Little Big Inch" pipeline from gas to petroleum products—including heating oils and LP-Gas—is expected to be completed in September, from Baytown, Texas, to Moundsville, W. Va., near Pittsburgh.

A 14-inch lateral line into Chicago is also planned.

This pipeline, which Texas-Eastern Transmission Corp. bought from the government after World War II and put into gas service, will be operated as a common carrier. It is expected to have a profound effect upon Midwestern oil markets, opening up "low-cost" transportation to Gulf Coast refiners.

Overruling the opposition of barge operators, the Federal Power Commission said reconversion of this pipeline "will stimulate and improve competition to the benefit of consumers of petroleum products and in the furtherance of the anti-trust statutes."

But the barge operators, who contend that the pipeline will "monopolize" oil transportation in the Ohio-Mississippi Valley, have not given up their fight, asking a rehearing by the FPC as a prelude to a renewed court attack.

Asks Stay for Oil Shale Plant

Senator O'Mahoney (D, Wyoming) has asked Interior Department to halt dismantling of the oil shale plant at Rifle, Colorado. Navy is seeking control of this project, with an eye to oil shale as a future source of high-grade diesel fueloil.

'End Use' Control on Gas Hit

National Coal Association has lost another round in its fight to block a pipeline—only 1½ miles long—to supply natural gas to the Black Dog generating plant, near Minneapolis, on the grounds that it was an "inferior" use of gas to burn it under boilers.

Meanwhile, three California gas distributing companies have filed complaint with the state utilities commission, attacking the proposal of a subsidiary of Southern California Edison Co. to build its own pipeline to transport gas from San Joaquin Valley to a generating plant near Los Angeles.

They contended that to divert part of California's limited gas supply "solely for boiler fuel" would be "detrimental" to the public interest.

Seek More Jet Fuel Suppliers

The military is seeking to interest more independent refiners in supplying fuel for jet aircraft (20% distillate, 73% low-grade gasoline, and 7% kerosene).

A portion of each jet fuel procurement is being set aside for award to refiners—qualifying under the small business preference—at the top price of the awards on the unreserved portion.

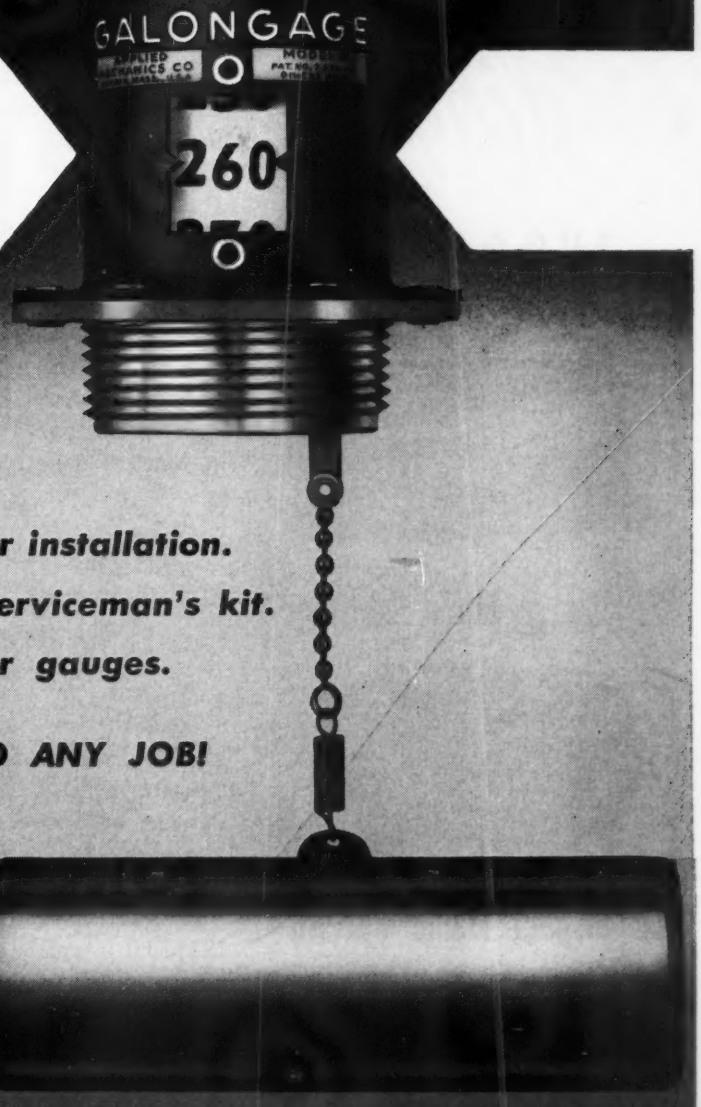
Chairman Smathers (D, Florida) of the Senate Small Business Committee has said he would like to see all of the jet fuel requirements purchased from small refiners.

NPC Escapes Govt. Chairman

House has passed a bill laying down strict rules for industry advisory groups such as the National Petroleum Council—but an amendment was added on the floor which permits an industry man to be the chairman, provided the group meets only in the presence of a full-time government employe.

the "EXTRA" your customers will gladly buy!

Reads in gallons for customer convenience



- Has easy-to-read numbers.
- Requires only 4" clearance for installation.
- Fits conveniently, safely in serviceman's kit.
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GIVES QUALITY APPEARANCE TO ANY JOB!

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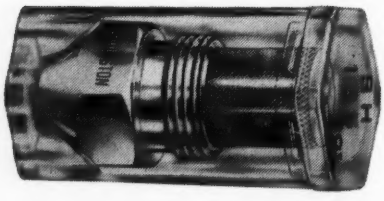
Annual Clean-up Time is Here!

Eddington

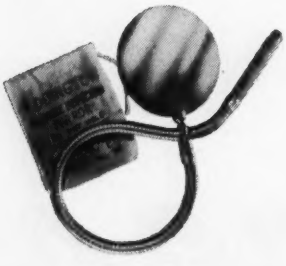
SUGGESTS:

1. Install New Nozzle



2. Change Filter Cartridge

3. Inspect Flame Pattern



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EDDINGTON
METAL SPECIALTY CO.
Eddington, Pennsylvania

Names in the News

K. O. Ralphs has been named general sales manager, Timken Silent Automatic Division, Scaife Co., Oakmont, Pa. He joined Timken in 1945 as district sales manager and was later regional manager in the Midwest and Western Canada. In June 1956 he became sales manager.

Robert E. Preston manager of consumer sales in home office marketing, Standard Oil Co., (Ohio) in Cleveland, was promoted to the newly created post of assistant general manager of division sales.

He has been with Sohio since 1921 and is widely known in the oil industry.

Salem A. Hart, Jr. will replace Preston as manager of consumer sales and *John L. Knotts* will succeed Hart as consumer sales manager for the Cleveland sales division.

Kenneth H. Cadigan and *Gilmore Hiett*, sales and advertising executives, are newly-elected members of the board of directors of The Gorman-Rupp Co., Mansfield, Ohio. Both officials joined the company in 1946. Cadigan is vice-president in charge of sales and Hiett was promoted from manager of advertising and sales promotion to vice-president. *Dale D. McKinley* was named assistant advertising manager.

William H. Cochrane has been named executive vice-president, Neptune Meter Co., New York. He will be responsible for maintaining a close liaison with the corporation's subsidiaries and coordinating policies and operations effecting administration, manufacturing and sales activities. Cochrane was formerly associated with Lever Brothers Company, as general manager, industrial division.

K. E. Hartzler has been made managing director of the Oil Heat Institute of Southern Idaho. Hartzler who has been manager of the Idaho Motor Transport Assn. for the past eight years will continue to serve in that capacity in addition to his duties with OHI.

Raymond S. Doherty has been appointed builder sales and promotion manager, Heating and Air Conditioning Division, National - U. S. Radiator Corp., Johnstown, Pa. Having been with the company since 1949, he brings to his new assignment over 25 years experience in sales, advertising, sales promotion and sales management.

Wilfred H. Hall was named assistant to the vice-president of Pocahontas Fuel Co., Inc., Salem, Mass. His early training in the retail fuel business ranged from the installation of heating equipment to executive capacity.

Donal M. Sullivan, executive secretary of the Independent Oil Mens Association, Boston, Mass., has been named its general counsel. He has been with the IOMA since 1951 and has appeared on oil matters before a number of House Committees of Congress, before the Senate Finance Committee and other administrative agencies.

Webster Service Saver

THE ROTARY FILTER THAT NEVER CLOGS

The dynamic new design of Webster's **ServiceSaver** fuel-unit make internal wire mesh strainers a thing of the past. **ServiceSavers** amazing rotary filter renews the filtering surface 7000 times a minute . . . gives "new filter efficiency" for the life of the unit. Thousands of operating units have proven its ability to eliminate clogging, cleaning and costly service calls. Use **ServiceSavers** on your oil burning equipment. They'll back up the reputation of your burner for efficiency and trouble-free operation.

Catalog data sheet A9A1 gives complete specifications, installation drawings, dimensions, rating, etc. Write for your copy. No obligation.

COMPLETELY INTERCHANGEABLE —will replace any fuel-unit now on market

MOUNTS IN ANY POSITION —for easier changeover

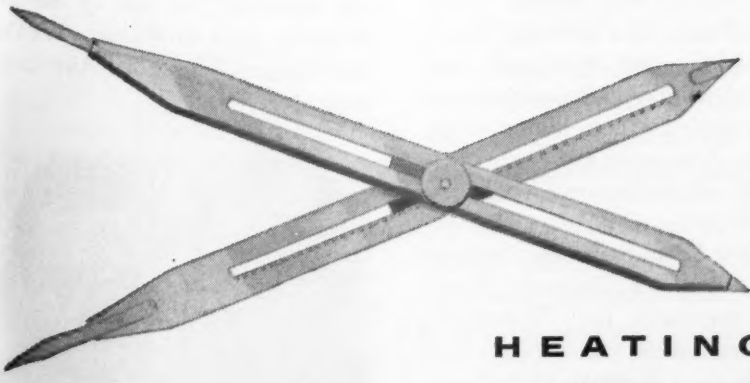
COMPACT AND LIGHTWEIGHT —permits installation in the tightest of quarters

LOW-FRICTION SEAL —and life-time lubricated outboard seal bearings

CONVERTIBLE —one and two pipe changeover —without extra parts

360° PORT ARRANGEMENT —optional ports for convenience and serviceability

TO KNOW MORE ABOUT THE FUEL-UNIT YOU'D DESIGN FOR YOURSELF



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HEATING DIVISION

WEBSTER ELECTRIC

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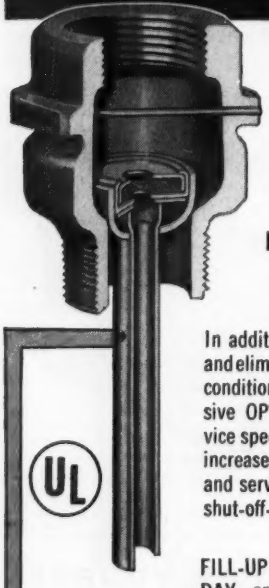
STOP
• OVERFLOWS
• DELIVERY DISTURBANCES
• IRATE CUSTOMERS

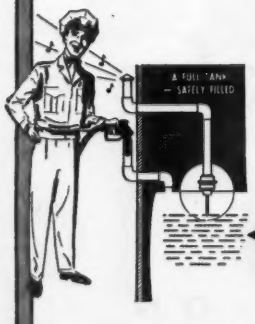
INSTALL
OPW TANK WHISTLE
FILL WHILE IT WHISTLES — STOP WHEN WHISTLE STOPS
Tank always fills to proper level.



No. 7-A

In addition to controlling and eliminating hazardous conditions, this inexpensive OPW signalling device speeds up deliveries, increases filling efficiency and serves as the perfect shut-off-time alarm.

FILL-UP time, ANYTIME, DAY or NIGHT, FROM OUTSIDE THE BUILDING.



FREE BULLETINS F-30 and F-34 give full details on all styles, installation, etc.

OPW CORPORATION
2735 Colerain Ave.
Cincinnati 25, Ohio
Kirby 1-5400

Leonard S. Marshman has been named manager of the Fueloil Division, Socony-Mobil Oil Co., New York. He succeeds L. B. Fox who has been transferred to head the Asphalt Division.

William E. Pflieger has been elected to the board of directors, Sacco Oil Co., Montreal, Canada. He joined the company in 1952 as general sales manager of heating equipment and fueloil. He had been associated with Williams Oil-O-Matic and Petroleum Heat and Power for many years in the States.

Gordon E. Perkins has been appointed assistant sales manager (marketing), Blackmer Pump Co., Grand Rapids, Mich. The appointment is in line with the firm's policy of expanding its market research and field organization. Perkins had been with Houdaille Industries, Inc., Buffalo, for six years before joining Blackmer.

William J. Rick has been appointed midwest division manager of Granberg Corp., Oakland, Calif., manufacturers of Granco pumps, meters and accessories. His new duties will include both sales supervision and consolidation of the company's factory co-operative plan for its midwest distributors. The midwest headquarters has been moved to 1448 N. Elston Ave., Chicago 14, Ill.

New regional sales manager of the Tuthill Pump Co., Chicago, Ill., is *M. J. McCaughey,* who will have charge of Tuthill's sales organization in Wisconsin, northern Illinois, southern Iowa, Minnesota and eastern Missouri. He will headquarter in Chicago.

Stanley Berns has been appointed to the board of directors, Foster-Miller Associates, Inc., Watertown, Mass., consulting mechanical engineers. Berns is chairman of the board, Pullman Vacuum Cleaner Corp., Boston, Mass., and a board member of several other Boston companies.

Warren Tauber has been appointed district representative for American-Standard Air Conditioning Division, New York, N. Y., in northern New Jersey, replacing *Walter L. Bradshaw,* who recently resigned to become manager of the airconditioning department, United Plumbing Supply Co., Plainfield, N. J., a distributor for the American-Standard Air Conditioning Division.

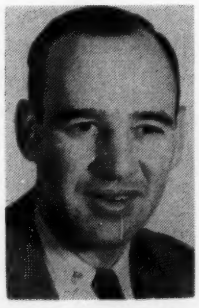
Floyd H. Aarvig has been appointed district sales manager, Century Engineering Corp., Cedar Rapids, Iowa. Aarvig will be in charge of District No. 16 which comprises parts of Kansas, Missouri, Illinois and Kentucky.

John R. Cooke was named district manager for Electric Furnace-Man, Inc., Emmaus, Pa. He will cover New York City, Long Island, Rockland and Westchester, New York Counties, Northern New Jersey and Fairfield County, Conn. He enjoys a long experience in the domestic and commercial heating field.

H. L. Balthazar was appointed assistant sales manager, domestic water heaters, Permaglas Div., A. O. Smith Corp., Kankakee, Ill. *V. H. Swearingen* formerly assistant to Balthazar raplaces him as marketing services supervisor.

Carl G. Lang and *Carl L. Riddle* have been named sales managers of the western and eastern regions respectively for the Heating and Airconditioning Division, Stewart-Warner Corp., Lebanon, Ind.

Lang joined the organization in 1947, and Riddle a year earlier. Both will supervise the sale of Stewart-Warner, Stewart-Warner Winkler and Stewart-Warner Saf-Aire equipment.



Lang

Riddle

This new fuel oil formula—

MEANS MORE SALES . . .
MORE CUSTOMER SATISFACTION!

Take America's famous fuel oil brand—Mobilheat. Add the most completely effective clean-action additive ever developed—revolutionary RT-98. Result? A top-quality fuel oil that helps keep fuel tanks, lines, strainers and filters free of dirt and sediment. That means complete satisfaction to your customers.

There's another important reason why New Mobilheat means more fuel oil sales for you. It's backed by one of the greatest names in the petroleum industry—Socony Mobil—with 91 years of oil marketing and merchandising experience.

Make it warm for your customers..."hot" for competition with new improved ***MOBILHEAT!***

SOCONY MOBIL OIL COMPANY, INC., and Affiliates: MAGNOLIA PETROLEUM COMPANY, GENERAL PETROLEUM CORPORATION

fueloil & oilheat

For dependable water level control use

MAID-O'-MIST

FLOAT CONTROL VALVES

Thrifty answer to limited space in

HUMIDIFIERS
PAN FILLERS
AIR CONDITIONERS
AIR WASHERS

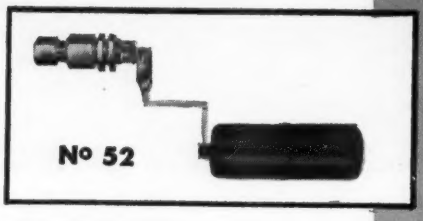
FAMOUS No. 50 SERIES

Compact, precision-designed, you can count on MAID-O'MIST float control valves to effectively meet your water-level control requirements. An acknowledged leader in its advanced engineering, they give faithful performance.

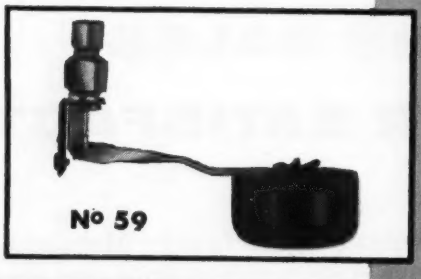
No. 51 FLOAT CONTROL VALVE

Only 5¾" long overall, including copper float 2⅛" in diameter x 1¼" deep. Stem and body made of brass . . . valve seat of hard nylon, protected with fine metal screen. Can be fitted in 9/16" hole or screwed directly into tapped opening. Up to 85 lbs. pressure; ½ gal. per minute at 50 lb. pressure.

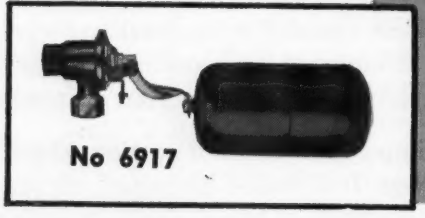
No. 52
Similar to No. 51, but designed for 1 gal. per minute capacity at 50 lbs. pressure, with pressures to 125 lbs. Overall length, 8", with 1½" x 4⅛" long float.



No. 59
Valve is vertically mounted with special bracket to mount on reservoir or pan well above water line. Just 5" long.



No. 6917
Series Diaphragm Valves
Heavy duty, large capacity water level controls, rugged and strong. Capacities 1¼ gal. to 6 gal. per minute.



Get full information from your jobber or write for catalog today!

MAID-O-MIST Inc.

MAID-O'-MIST, Inc.

3217 NORTH PULASKI ROAD · CHICAGO 41, ILL.

Corrections and Additions for May Product Directory

William H. Eldridge Advertising Service, 87 Maywood Rd., New Rochelle, N. Y., under *Printed Forms:* Billheads; Budget payment envelopes; Decalcomanias; Fueloil order forms; Burner instruction cards; Tank capacity charts.

Quickdraft Co. The address shown on page D60 is incorrect; it should be Dueber-Hampden Bldg., 1650 W. Tuscarawas St., Canton 1, O. The company is a division of Basic Improvements, Inc.

Reiser Chemical Co., 475 Fifth Ave., New York 17, N. Y., Sidney J. Reiser, president; should be listed under *Compounds & Chemicals,* Boiler sealing, Boiler water treatment, Fueloil deodorant, Fueloil treatment, Grease removing, Hand cleaning, Oil absordent, Rust preventing, and soot destroyer.

Builders' Show to be held in Chicago, January 19-23

EXHIBIT SPACE assignments for the 1958 convention and exposition of the National Association of Home Builders will be made beginning August 19. The show will be held in Chicago, January 19-23.

Last year's exposition was sold out months in advance, and Paul S. Van Auken, convention director, anticipates another early sellout. Total attendance at the 1957 show was 28,427. Builders accounted for 8,213 registrants.

Commerce Department has Standards for Oilburners

COMMERCIAL STANDARD CS75-56, Automatic Mechanical - Draft Oil Burners Designed for Domestic Installations, has been issued by the Commodity Standards Division, U. S. Department of Commerce.

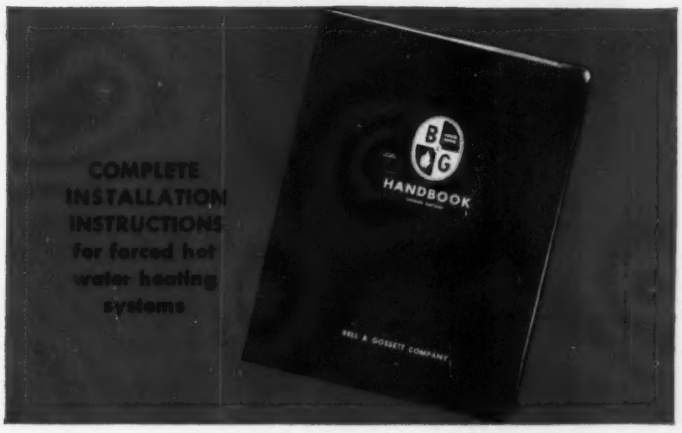
This edition is a revision of CS75-42 and establishes minimum standard specifications and methods of test for burners. Copies may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for 15 cents each.

...WITH B&G Hydro-Flo PRODUCTS

B&G MONOFLO FITTINGS

B&G INDIRECT WATER HEATERS

B&G COMPRESSION TANKS



distinctive features which have proved a warranty of better performance

terns for installation in either horizontal or vertical pipes. All sizes easily cleaned without breaking pipe connections.

B&G Monoflo Fittings. Not just "scoops" but carefully engineered to diversion capacities best suited to correct forced hot water system design. No limit to number which can be installed in a circuit.

B&G Indirect Water Heaters. These heaters reflect the efficiencies developed in over a quarter century of designing and manufacturing heat exchange equipment.

B&G Relief and Reducing Valves. Relief valves are *diaphragm operated* for more positive action and greater safety—built to ASME requirements. Reducing valves are equipped with Anti-siphon Check Valve.

B&G Airtrol Systems. The only equipment ever absolutely *guaranteed* to prevent air trouble in hot water heating systems.

B&G Compression Tanks. Expertly welded—every tank *tested with air*, not water, to assure a perfectly tight unit. At no extra charge, all B&G Compression Tanks are equipped with "Corky," a new fast drain plug and water level indicator.

Complete Installation Instructions. The B&G Handbook is used the country over as the accepted guide to correct hot water system design and installation.

If you haven't the latest B&G Hydro-Flo Products Catalog, write today for your copy.

*Reg. U.S. Pat. Off.

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DRAFT-O-STAT CONTROLS FLUCTUATING CHIMNEY DRAFTS!

MODEL "B"
Sizes 6" to 12"

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DOMESTIC MODEL "A"
Sizes 14" to 20"

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COMMERCIAL MODEL "AC"
Sizes 16" to 24"

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INDUSTRIAL MODEL "I"
Sizes 24" to 36"

LOW COST DOMESTIC AUTOMATIC DRAFT REGULATOR
Sizes 3" to 8"

MODEL "M"
Sizes 4" to 8"

WRITE FOR COMPLETE
Draft-O-Stat
INFORMATION

THE HOTSTREAM HEATER CO.
6929 QUINCY AVENUE
CLEVELAND 4, OHIO

May Contracts are up 14% over last year, says Dodge

MAY CONTRACTS for future construction rose 14% over the same month last year. The information was contained in a report issued by F. W. Dodge Corp., New York, N. Y., construction news and marketing specialists. One encouraging feature within the figures is the dollar volume of contracts for one- and two-family houses was at the same level as May 1956.

This is the first time thus far that dollar volume for this type of contract did not fall below last year figures. However, the number of housing units was 101,741, down 5% from the same month a year ago.

Contracts totaled $3,399,528,000. Non-residential buildings accounted for $1,119,587,000, up 11% compared to a year ago; residential buildings amounted to $1,297,258,000, down 1%; heavy engineering totaled $982,683,000, up 48%.

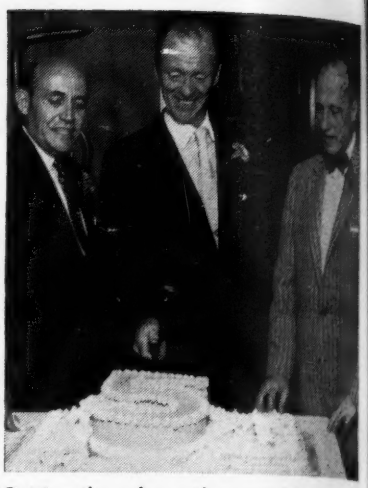
The May increases brought the cumulative total for the first five months to $12,714,519,000 or 4% above the same period of 1956. By categories the five month figures are as follows: Non-residential building $4,784,200,000, up 3%; residential building, $5,328,265,000, down 5%; and heavy engineering, $3,601,955,000, up 20%.

Lincoln Tech brings School right to burner Servicemen

A NEW TRAINING PROGRAM has been introduced by Lincoln Technical Institute, Newark, N. J., whereby the school is brought to the student rather than having him commute for oilburner service instruction.

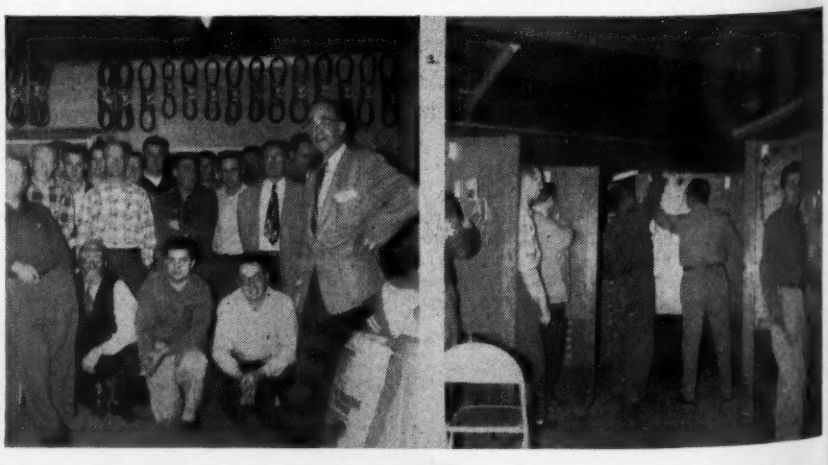
The initial school in the program was held at Burner Parts, Brielle, N. J. Twelve firms sent servicemen to the school where all materials such as controls, burners, pumps, etc., were supplied by the Institute.

John W. Davies is director of the school and plans are underway to have other instruction programs located near the servicemen to cut down on commuting time.



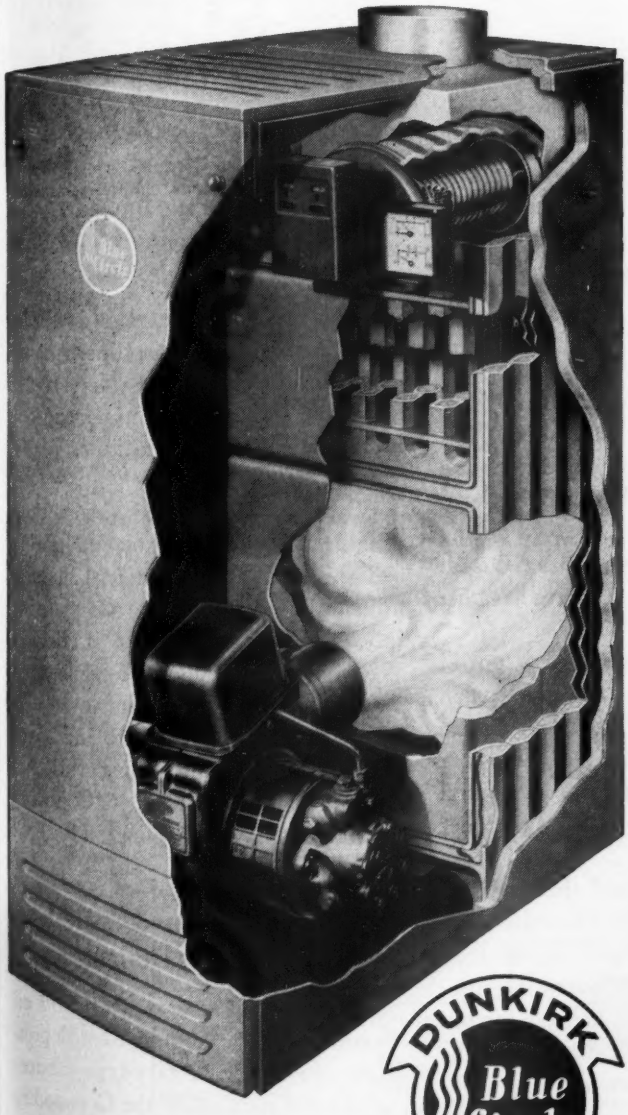
Cutting the cake at the annual banquet for employees of Meenan Oil Co. held at Morrisville, Pa., is William F. Kenny, Jr., president. He is flanked by William C. Henwood, vice president, and Louis Funsten, manager, fuel-oil division. The affair marked the fifth anniversary of Meenan's entrance into the Pennsylvania fueloil picture.

William A. Becker, 6919 Roe St., Cincinnati, has been appointed sales representative for Neptune Meter Company's industrial and petroleum meters in Ohio, and parts of Kentucky and Tennessee. Prior to joining Neptune, Becker was on the sales staff of Neptune Equipment Co.



HOW DUNKIRK BLUE CIRCLE BOILERS AND RADIATION GIVE YOU A COMPLETE PROFIT PACKAGE

Cast Iron Boilers
Complete Lines of Radiation
Complete Line of Accessories
Prices that Make Liquid Heat Competitive
Single Source of Supply That Simplifies Ordering, Stocking, Installation



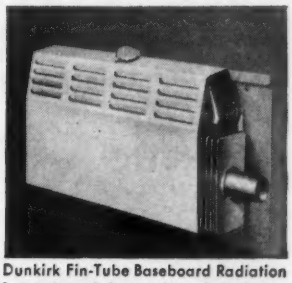
The Dunkirk Line is the HEATING MAN'S LINE. There are boilers for every job...steam, and hot water. Sizes to fit every home. Flush or extended jackets...completely packaged with all accessories, factory-assembled and wired if you wish. All made of cast iron, the Lifetime Metal. Priced to get the business and pay worth while profits.

Cast iron and copper-aluminum radiation in complete lines of free standing and baseboard give you a complete system from a single source. Save ordering time, save inventory, save delivery time, save installation time all along the line.

The busy heating season is just ahead...it will pay you to get the profit making facts on the Dunkirk Blue Circle Line...the HEATING MAN'S LINE.

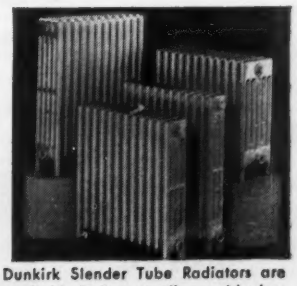
Write for Catalogs on Dunkirk Blue Circle Boilers, Radiation and Accessories

Dunkirk RadiaVectors are used where space limits adequate baseboard run for effective heating. Available in free standing and recessed models.



Dunkirk Fin-Tube Baseboard Radiation is packaged in ready-to-install sections. Requires minimum warehouse cubage.

Dunkirk Cast Iron Baseboard Panels are suitable for new construction or modernization. May be installed as a series loop, 1 or 2 pipe forced circulation system, or 2 pipe steam system.



Dunkirk Slender Tube Radiators are available in free standing and legless types in 3, 4, 5 and 6 tube sizes. Narrow widths and low heights are ideal for under window installations.

DUNKIRK Blue Circle

DUNKIRK RADIATOR CORPORATION

DUNKIRK, N. Y.

Member of The Institute of Boiler and Radiator Manufacturers

FREE!
OF EXTRA COST
WITH
SOLDER SEAL
World-Famous
Boiler Chemicals!

With only 6 CANS
(ANY COMBINATION)
You get this famous
KIDDE
Jet King
A $2.34 VALUE
BUTANE
BLOW TORCH
*Each cartridge lasts 30 min.

With only 12 CANS
(ANY COMBINATION)
You get this handy 9"
STANLEY
MAGNETIC
TORPEDO
LEVEL
A $4.30 VALUE!
● 3 vials—level, plumb, 45° mitre
● New, lightweight aluminum

THESE FREE PREMIUMS
NOW INCLUDED
with ANY COMBINATION
of these World-Famous
SOLDER SEAL
BOILER
CHEMICALS
RUST RAIDER
BOILER LAX
At your wholesaler's!
Manufactured by 2186
SOLDER SEAL
RADIATOR SPECIALTY CO.
Charlotte, North Carolina

Airconditioning cuts down summer Conflicts say Women

To get a more personal view of what women have discovered about airconditioning, John W. Norris, president, Lennox Industries, Inc., Marshalltown, Ia., invited a group to lunch for a frank discussion of residential cooling.

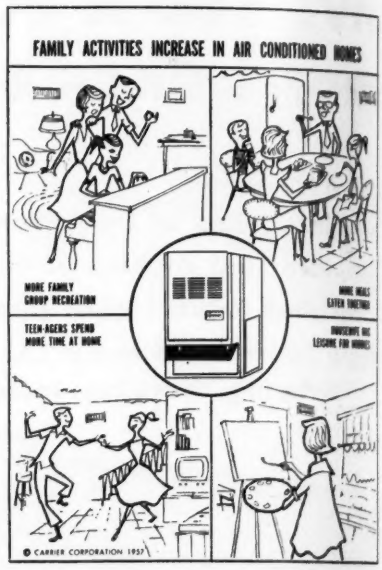
According to the ladies the greatest plus-value of airconditioning is that central cooling has cut down on family arguments and all factions—husband, wife, and children are easier to live with during the hot summer months.

Other unusual factors discovered at the lunch included: More families with central airconditioning are taking winter vacations. Housewives find it easier to hire domestic help. Dogs and cats no longer roam the neighborhood but revel in cool indoor comfort. Families cook outside; but they eat inside away from insects, wind and heat. Women's garments stay fresher longer.

In addition these women who have airconditioning have discovered: That asthma and hay fever conditions are eased considerably; that there has been an increase in hot meals served during summer; that the humidity is reduced; and that housekeeping chores have become more pleasant.

Both cost and intricacy of control bothered women. However, the women who have taken the trouble to examine electric and water bills closely were less concerned about cost. One said that her cooling cost was less than her winter heating bill.

Norris has estimated that the cost of a central residential airconditioning system is roughly equal to the total cost of three window units. He predicted that by 1970 central airconditioning will become standard in the majority of American homes.


FAMILY ACTIVITIES INCREASE IN AIR CONDITIONED HOMES
MORE FAMILY GROUP RECREATION
TEEN-AGERS SPEND MORE TIME AT HOME
© CARRIER CORPORATION 1957

In the same vein, Carrier Corp., Syracuse, N. Y., illustrates family improvements after cooling was installed at the "Austin Village."

Airconditioning Show to be in Chicago November 18-21

AS AN AID to exhibitors who want to do market research, the Air Conditioning & Refrigeration Exposition will, for the first time, open its doors to the general public on the last day. The show will be held at the International Amphitheatre, Chicago, Nov. 18-21, and is sponsored by the Air Conditioning & Refrigeration Institute, Washington.

Exhibits will include airconditioning units for both cooling and heating in the domestic, commercial and industrial fields. Advance sale of space to exhibiting companies is already above the total amount of exhibit area at Atlantic City two years ago.

The show is sponsored and managed by Air-Conditioning and Refrigeration Institute, 1346 Connecticut Ave., N.W., Washington 6, D. C.

Furnace Standard issued by Commerce Department

COMMERCIAL STANDARD CS195-57 on warm air furnaces equipped with pressure atomizing or rotary-type oilburners has been issued by the Commodity Standards Division, U. S. Department of Commerce.

This edition is a revision of CS195-54 and can be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 15¢.

WITH Luxaire®

COMPARE

the VARIETY!
the QUALITY!
the PRICE!

Gas Winter Air Conditioner has front panels removed to show complete factory assembling and wiring.

Winter Air Conditioner with Plenum Type Cooling Coil. Provision is made to increase Blower capacity for cooling, as needed.

Oil Winter Air Conditioner, showing interior construction with long air travel over Round Combustion Chamber and large Front Radiator.

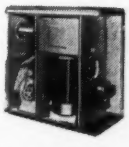
You'll see *WHY...*
It's the
MOST ADVANCED
Complete Line of
HEATING . . . COOLING
. . . YEAR 'ROUND AIR
CONDITIONING UNITS

Winter Air Conditioners and Counterflow Units — 75,000 to 150,000 Btu Input, Gas Fired; 78,400 and 112,000 Btu at Bonnet, Oil Fired — these completely new Luxaire Furnaces need less space and require connection of only the fuel line, electrical supply and ducts for installation. Compare the modern good looks, the heavier construction and the low prices!

Year 'Round Air Conditioner 2, 3 or 5 Ton Air or Water Cooled Gas or Oil Fired.

Add-On Water Cooled 3 or 5 Ton Summer Air Conditioner.

Add-On Air Cooled 2, 3 or 5 Ton Summer Air Conditioner. Compressor-Condenser Assembly available with Duct or Plenum Type Cooling Coil.



Basement Type Winter Air Conditioner Oil or Gas Fired.

Utility or Counterflow Winter Air Conditioner Gas or Oil Fired.

Horizontal Furnace 4 Oil Models 4 Gas Models

Gravity Furnace Gas or Oil Fired.

Gas Fired Unit Heater 5 Models.

Gas, Oil or Coal Furnaces that are famous for advanced engineering, sturdier construction and trouble-free performance — Air or Water Cooled Air Conditioners that are more rugged and less complicated — Luxaire gives you the size and type of unit you need, at the price which enables you to compete sucessfully.

In today's price-conscious heating market, you can benefit from the down-to-earth Luxaire price. Due to efficient manufacturing and because Luxaire puts cost where it counts — in heavier, more durable construction, instead of in troublesome gadgets—you can buy the superior Luxaire Unit for the price of a cheap furnace.

With Luxaire, you have what you need to forge ahead in today's competition. You have excellent units that you can install in less time and at lower costs, and really competitive pricing.

So, if you want to improve the quality of your installations, while increasing the profits of your business, why not call your Luxaire jobber for catalogs and price sheets, now?

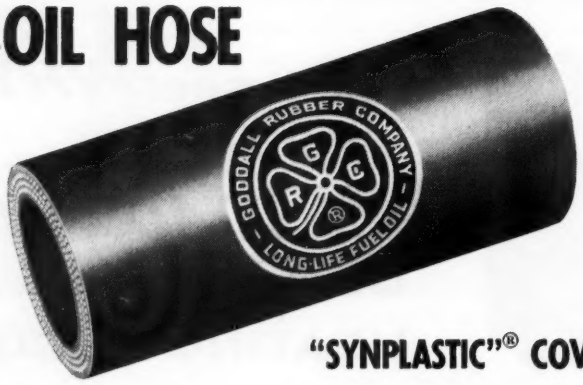
THE Luxaire® C. A. OLSEN MANUFACTURING COMPANY . . ELYRIA, OHIO

HEATING & AIR CONDITIONING UNITS

fueloil & oilheat

Always the Answer to Lower Handling and Replacement Costs...

GOODALL "LONG-LIFE" FUEL OIL HOSE



"SYNPLASTIC"® COVER

You can *always* rely on "Long-Life" Fuel Oil Hose for quick, low-cost deliveries and *additional* savings through longer service between replacements.

Because "Long-Life" is light in weight and extremely flexible, the hose is easier to carry out and re-reel. This means more stops per truck per day, more fuel oil delivered, and less fatigue for the driver.

The strong, durable molded-and-braided "Long-Life" construction assures extra long hose life under all conditions of weather and rough handling . . . replacement costs are reduced to the minimum.

Sizes 1" to 1½". Maximum lengths of 175 feet. Brown "Synplastic" (R) cover.

Contact Our Nearest Branch for Details and Prices

"If it's GOODALL, it MUST be Good!"

Standard of Quality—Since 1870

HOSE • BELTING • FOOTWEAR • CLOTHING
AND OTHER INDUSTRIAL RUBBER PRODUCTS

GOODALL *Rubber Company*

GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.
Branches and Distributors Throughout the United States and in Canada

Heating-Cooling Council Speaker stresses Growth

FRANKLIN GREEN, executive director, the Better Heating-Cooling Council, recently told newsmen that the wide choice of compatible cooling systems for homes heated with liquid systems will result in 200,000 such homes being centrally cooled this year.

He predicted that this number will increase steadily, regardless of the number of housing starts each year because many of these cooling systems will be installed in existing houses.

His remarks were made following a tour of four year-round airconditioned houses on Long Island. Each house had a different type of cooling system, but all were heated by either forced hot water or steam.

One home used combination fan-coil units to heat, cool, filter and dehumidify the air—the fan-coil units are connected to insulated piping that carries either hot or chilled water from the boiler or water chiller.

The basement and first floor of another house was cooled by self-contained through-the-wall room units, while the second floor is cooled by a central attic system.

The third house incorporates a water-cooled attic airconditioning system, and the final house has an out-of-sight attic system.

Insulation Study shows lower Costs for Cooling

CONSTRUCTION COSTS were materially reduced when additional mineral wool insulation beyond FHA requirements was installed at the Airconditioned Village at Austin, Tex.

This point is developed in a booklet published by the National Mineral Wool Association, New York. The study is based on the findings of John R. Watt, University of Texas, and formerly chief analyst of the experimental project.

Initial costs were reduced because two-ton units were sufficient in the heavily insulated homes as contrasted with the three or four-ton units needed to cool the ordinary home. The average saving to the builder was about $140 per house.

Operating costs for the owners of

Actual road tests prove Dodge outpulls "other two" low-priced trucks by 32%

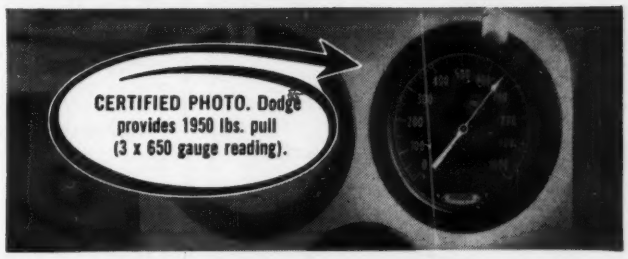
Dodge gives you *Extra Pull* . . . cuts running time and maintenance costs

Here is definite proof that Dodge gives you a big power advantage that will pay off on your hauling jobs.

All three low-priced trucks were recently compared side by side in a grueling series of performance tests. The dynamometer test shown here is only one of them. And in each test . . . *climbing power* . . . *passing power* . . . *pulling power* . . . Dodge proved the outstanding truck of the low-priced three.

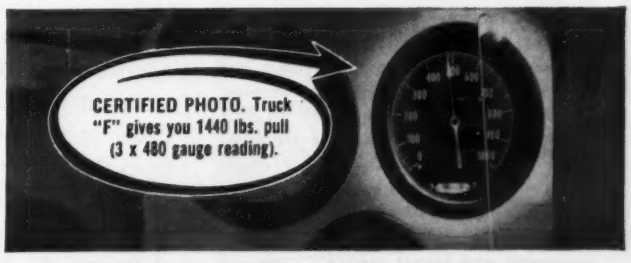
Extra power does it. From 204- to 232-hp. V-8's, Dodge *Power Giants* deliver the extra power you need to handle your hauling jobs faster, with less engine strain. Naturally, less strain means less wear, fewer repairs as you pile on the miles.

See proof for yourself. Certified results of all the comparison tests are in your Dodge dealer's showroom. Look them over and we think you'll be convinced that your next truck should be a Dodge.



DODGE and competitive trucks were tested for pulling power by towing a special dynamometer truck. Gauges measure maximum pulling force exerted. To convert this force into pounds, gauge reading is multiplied by three.

TRUCK C, pulling the same dynamometer truck as the Dodge, was unable to equal the Power Giant mark in repeated tries. Gauges show Dodge outpulled Truck C by 32%.



TRUCK F in its turn pitted all its pulling power against the Dodge, to no avail. The sealed, accurate gauges reveal clearly that Dodge offers most "pull power" of the low-priced 3.

DODGE

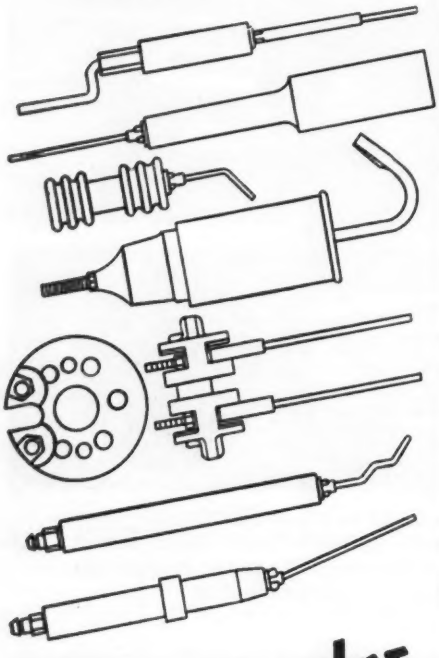
PowerGiants

fueloil & oilheat

MOST POWER OF THE LOW-PRICED 3

World's Largest Manufacturer
of the
Greatest Variety of Designs

Sparktrodes



Sparktrodes

IMPORTANT
to Service Organizations

All Jobbers in Dielectric's nation-wide system of distribution carry carefully-selected, well-balanced inventories of Sparktrodes in steady demand — all the designs most likely to be called for in the areas they serve. In almost all cases, they can, therefore, fill your orders directly from stock. Backing this service are Dielectric's unmatched facilities for making SAME-DAY SHIPMENT to them on 175 special designs, as well as Five Standard Types pioneered by Dielectric, for application to 144 oil burner brands. When you order Sparktrodes from a Dielectric Jobber, you are assured of finest quality equipment and fastest service.

OHI

DIELECTRIC
PRODUCTS COMPANY, INC.
Jersey City New Jersey

the eight houses in the study have been lower than the Austin average for comparable homes. Annual savings in heating and cooling costs averaged $107.90 per house.

May Big Burner Shipments lower than '56 says OHI

ACCORDING to the Market Research Department of Oil-Heat Institute, May shipments of commercial-industrial equipment were off nearly 40% compared to the same month a year ago.

This sharp May drop is reflected in the shipments for the year to date. Thus far, 10,278 big burners have been shipped compared with 12,780 for the first five months of 1956.

Statistics on baby rotaries are no longer collected, but the '56 figures have been adjusted in the same way.

A breakdown as to size and type of May shipments follows:

	Oil-burners	*Gas-Oil-burners*
HORIZONTAL ROTARIES		
Over 2½ to 8	14	..
Over 8 to 30	210	25
Over 30 to 100	273	68
Over 100	22	5
Total Shipments	519	98
GUN BURNERS		
Over 5 to 30	1,234	78
Over 30	36	20
Total Shipments	1,270	98
MECH. ATOMIZING		
30 and over	3	..
TOTALS, ALL TYPES	1,792	196

Burner Standards amended by Fire Protection Group

THE National Fire Protection Association, Boston, has issued a revised standard for the installation of oilburning equipment titled NFPA No. 31.

Of interest to the industry is the increase in allowable basement tank size from the long standing 275 gallons to tanks up to 550 individual capacity. Another amendment concerns heat reclaimers—the Association now recognizes these devices when listed by Underwriters' and installed in accordance with their listing.

A number of changes were made in the chapter on clearances for specific types of appliances.

DON'T get blamed

... for troubles caused by WATER in fuel oil tanks!

USE...SELL

FUEL-TRON®

USE 1 PINT TO 275 GALLONS OF OIL

REMOVES the cause of trouble . . . WATER!

- **Keeps Oil Burners and Tanks CLEAN.**
- **Removes Water, Sludge.**
- **Permits Oil to Burn Properly.**

Continued use of FUEL-TRON will keep oil tanks, fuel lines and burners clean and free from sludge and corrosion. Fuel burns more efficiently, you get fewer complaints.

STOCK UP NOW!

FREE! $2.50
ADVERTISING CERTIFICATE
packed in every case!

Enables you, the dealer, to advertise in your own local newspaper . . . at NO COST to you!

SOLDER SEAL

One of the many famous "CHEMICAL TOOLS" made by
RADIATOR SPECIALTY CO.
Charlotte, North Carolina

NOW!
clean furnaces faster, without risk of Bag "Blow-out!"

$99.50

NEW
SOOTMASTER
Furnace Cleaner #521
WITH DISPOSABLE FILTER

There's no outside bag to worry about... no bag that you have to empty... with NEW SOOTMASTER. This new kind of furnace cleaner has a super-efficient *disposable* filter with throwaway bag *inside* the tank. Double filtering action guarantees *cleaner* cleaning. Light weight. Easy rolling. Preferred by professionals.

G.E. & PREMIER OWNERS!
Replace outside bag with **SOOTMASTER** *Filter Unit* **THROWAWAY BAG!**
CONVERT to this...

ELIMINATE OUTSIDE BAG
MODEL FU-1A
Same Filter Unit as SOOTMASTER Cleaner especially designed to fit in the tank of G.E. and Premier Furnace Cleaners. Eliminates outside bag. Provides safe, sanitary way to dispose of soot and dirt. Filter Unit complete with 10 throwaway bags and quick-release tie cord.....$17.50

Model UC-1A
Brand new suction motor unit plus FU-1A disposable filter unit assures quiet operation. Fits G.E. and Premier Cleaners. Big economy replacement; Guaranteed.....$54.50

Dust bags and hoses for all industrial models.
Order from your jobber.
Jobber inquiries invited.

Distributed in Canada by Imperial Refractories

MASTER-CRAFT
SUPPLY CO., INC.
W. HAVERSTRAW, NEW YORK

John Harper, Harper Oil Co. and chairman of the board of trustees, Petroleum Education Foundation, New York, N. Y., presents a scroll to Kenody R. Ware, Sun Oil Co. and past chairman of the board of trustees. The scroll was presented in recognition of Mr. Ware's contributions to the establishment and operation of classes in New York's vocational high schools. These include oilheating classes for vocational school students and refresher classes at night for oilheating employees. Fittingly enough, the presentation was made at the formal opening of the Petroleum Division in the new William E. Grady Vocational High School, Brooklyn, N. Y., whose facilities include a complete shop for oilheating instruction.

White Motor Co. purchases Assets of Reo Motors, Inc.

ROBERT F. BLACK, chairman of the board and chief executive officer, The White Motor Co., Cleveland, and Simon D. Den Uyl, president, Bohn Aluminum & Brass Corp., Detroit, announced recently that White Motor has purchased the assets of Reo Motors, Inc., Lansing, Mich., from Bohn.

Reo will be operated as a division of White under the direction of John C. Tooker who will be general manager. General offices, including manufacturing and sales, will continue to be at the present plant in Lansing.

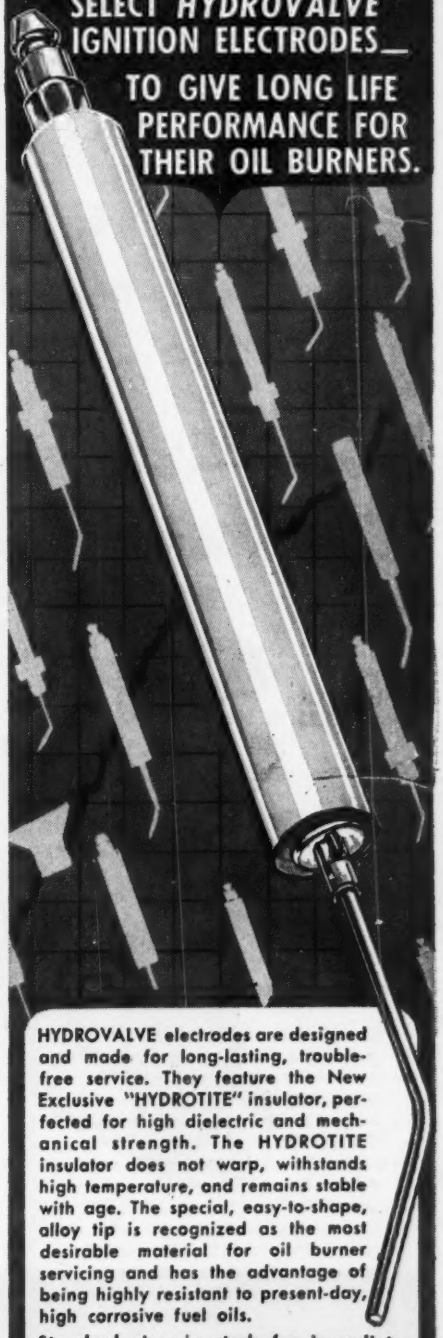
Alert Service Corp. opened by Pastel for oil Dealers

WALTER PASTEL now heads a new company, Alert Service Corp., located at 200 Webster St., W. Newton, Mass.

The company is sub-contractoring oilburner service for fueloil distributors in the area.

LEADING
OIL BURNER MANUFACTURERS

SELECT *HYDROVALVE* IGNITION ELECTRODES— TO GIVE LONG LIFE PERFORMANCE FOR THEIR OIL BURNERS.



HYDROVALVE electrodes are designed and made for long-lasting, trouble-free service. They feature the New Exclusive "HYDROTITE" insulator, perfected for high dielectric and mechanical strength. The HYDROTITE insulator does not warp, withstands high temperature, and remains stable with age. The special, easy-to-shape, alloy tip is recognized as the most desirable material for oil burner servicing and has the advantage of being highly resistant to present-day, high corrosive fuel oils.

Standard sizes in stock for immediate delivery.

HYDROVALVES' complete line of high quality oil burner service parts and tools are precision made by skilled craftsmen and are recognized throughout the oil burner industry.

BUY THEM FROM YOUR JOBBER— HE SERVES YOU WELL!

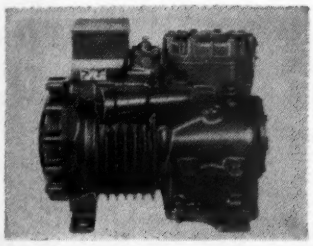
HYDROVALVE CO.
1319 Utica Ave.
Brooklyn 3, N. Y.

NEW from the

A whole new world of installation possibilities is opened up with the new Lennox condensing units. You can bury them in walls, building foundations, carports, or put them out in the open. Optional hood provides for air intake and discharge on the same side, with *no possibility of re-circulation.* There's no danger of killing shrubs or scalding grass. Without hood, air can be ducted in and out.

SOUND up!

NEW 4-TON CONDENSING UNIT...
full 48,000 Btu/h capacity (with 95° air entering condenser)



NEW "JOB-MATCHED" COMPRESSOR
The Lennox super quiet and serviceable compressor was built for this specific 4 ton unit—the same rugged, durable semi-hermatic design that has set new standards of quiet, economical, trouble-free operation under the toughest operating conditions in the field.

Another LENNOX First in Air Conditioning Design!

For those 3½ to 4 ton loads — where you've been forced to install 5 ton units at substantially greater cost — here's the perfect answer. The all-new Lennox 4-ton unit has been designed to fill this gap in equipment sizing. Now Lennox offers air-cooled equipment — years ahead in design — in these Btu/h sizes: 23,300; 34,100; 39,250; 41,700; 48,000; 58,100; 82,000; and 114,000 . . . each one honestly and conservatively rated at 95°, A.R.I. standard conditions.

It's another reason Lennox Comfort Craftsmen have the solution to every air conditioning problem.

MAIL THIS COUPON TODAY FOR FURTHER FACTS . . .

LENNOX Industries Inc.

Established 1895

Marshalltown, Iowa • Columbus, Ohio • Syracuse, N. Y. • Fort Worth, Texas
Salt Lake City, Utah • Los Angeles, Calif. • Decatur, Georgia • Des Moines, Iowa
Lennox Industries (Canada) Ltd.—Toronto, Montreal, Calgary and Vancouver

LENNOX Industries Inc.

Address nearest factory. See locations at left.

Please send me additional information on the "new from the sound up" Lennox 4-ton Air Conditioners.

I understand there is no obligation on my part.

Company.....

Address.....

City..... State.....

My Name.....

Hose Swivels with EVER-TITE precision

will not pull apart

EVER-TITE No. 2 Straight Thru Swivel

When this new Ever-Tite Swivel is used between the hose and nozzle, kinking and twisting of the hose is eliminated.

Free swivel action at all times—with parts firmly secured. Hose strain is prevented because the swivel assures quick and easy positioning of nozzle.

The Ever-Tite Swivel is always leak-proof because of a specially-designed machined seal and gasket. It is constructed of heavy-duty durable bronze—precision-engineered for typical Ever-Tite performance.

EVER-TITE No. 9 Check Valve Swivel

Ever-Tite No. 9 Swivel has all the features of the No. 2 plus the additional advantage of an inlet check valve. When the pump is shut off, an "O" ring seals against a tapered machined surface and prevents the hose from draining. Spring tension is approximately 1½ p.s.i.

Let these precision Ever-Tite Hose Swivels save wear on your equipment as well as operators' time. Write or phone your distributor.

EVER-TITE COUPLING CO. INC.
254 West 54th Street, New York 19, N. Y.

Elliott

Kenny

Loizeaux

Ray

Igniter and Aladdin Lamp Awards made at the annual OHI Luncheon

PRESENTATION of Igniters' Awards and Aladdin Lamps featured the annual OHI luncheon on June 6. Fred Heaney, toastmaster, presided at the affair which drew an attendance of 382.

He explained that three years ago Igniter Awards were started to bestow recognition upon distinguished marketers within the oilheating industry, "whose abilities, time and talents have contributed not only to the betterment of their own companies but to the advance of the entire industry."

Following are the names of Igniter Award recipients, along with a condensation of the citation read at the time of the presentation:

Everett Elliott, Danvers, Mass. Long a wheelhorse in the affairs of the Oil-Heat Institute of New England, he is a former president of that group and now is New England's representative on the board of directors, Oil-Heat Institute of America. He typifies all the fine qualities which a dealer must have in order to make an outstanding industry man.

William F. Kenny, Meenan Oil Co., New York. Despite his youthful appearance, he has shown an uncanny ability to organize and perfect some of the most modern techniques in the delivery of fueloil and the rendition of mechanical service. He has built up one of the largest retail fueloil organizations in the country in a relatively short time and is recognized as an outstanding leader in the development of new ideas and techniques. Further, he always has found time to aid and assist with general industry problems.

T. R. Loizeaux, Plainfield, N. J. He has developed a most substantial business, is a director of OHI and vice-chairman of the Eastern region, Distribution Division. He is extremely active in local community affairs and despite the demands these make on his time, Tim always offers his services and has been of material benefit to the industry.

B. L. Ray, Esso Standard Oil Co., New York. He has long been a leader in the marketing activities of his company and was largely instrumental in the creation and development of the Oilheating Market Reports program. The industry feels deeply indebted to him for his effort in this connection since the result has been of tremendous importance in the promotion of oilheating throughout the country.

Douglas W. Smith, Standard Oil Co. of Calif. Commonly known as "Mr. Heating Oil of the great Northwest," Doug's motto in life seems to be, "What can I do for the other fellow?" Members of the Distribution Division are proud to be associated with him, since over the years he has proved to be a real friend not only to the men within his own company, but to competitors and his own dealers, alike.

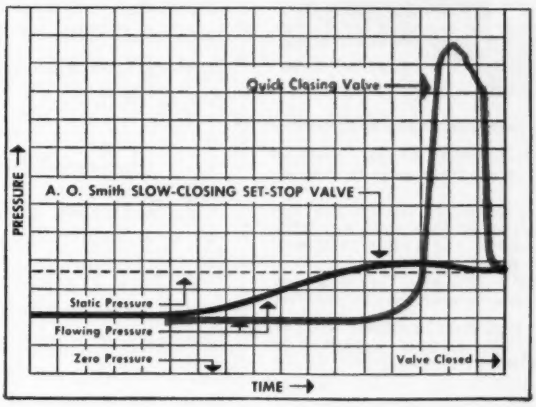
Francis J. Schuster, Troy Oil Co., Indianapolis. He is a wonderful testimonial to the fact that the boss' son can make good. Starting in business with his father a number of years ago, he has introduced many outstanding methods, such as an excellent cost accounting system, safe driver awards

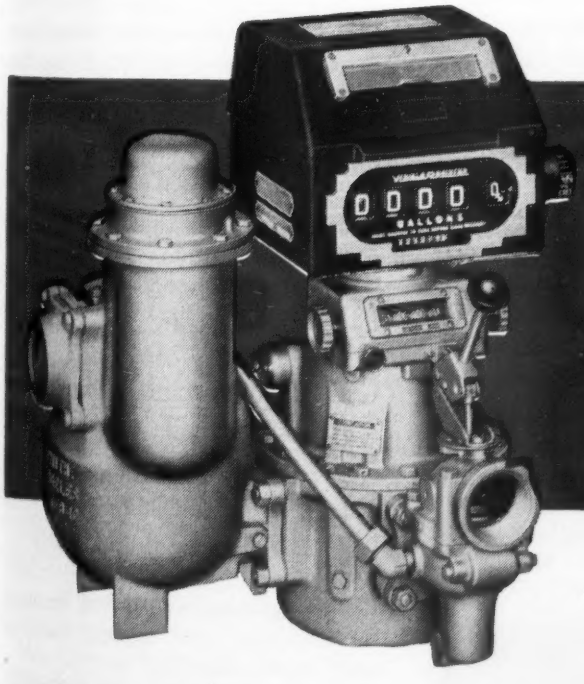
STOP hydraulic shock!

...Protect your equipment with slow-closing A. O. Smith set stop valves and counters for tank truck, bulk plant and terminal meters

A. O. Smith Set Stop Counters and Set Stop Valves provide a sure way for automatically shutting off the flow after the desired amount of liquid has been delivered. And it does so without hydraulic shock. RED CURVE on chart indicates severity of shock caused by ordinary quick-closing valves. BLACK CURVE shows smooth, anti-shock action with A. O. Smith slow-closing Set Stop Valves.

What's more, you get one-man operation that's safe, positive, accurate — even in situations where counter is not visible from the delivery point.





So simple to set up and operate . . . precision-built for sustained accuracy

For use with A. O. Smith Truck (T-Model) and Bulk Plant meters, these units can be mounted in any of several positions. Merely set the amount desired and open the valve.

When delivery is completed and the valve has closed, the reset counter shows the exact amount delivered. In case of emergency shut-off, flow may be resumed without affecting counter's accurate tabulation of total delivery.

Set Stop Counters can easily be added to existing A. O. Smith meters. (Meter model T-10 with Set Stop Counter and Valve, shown).

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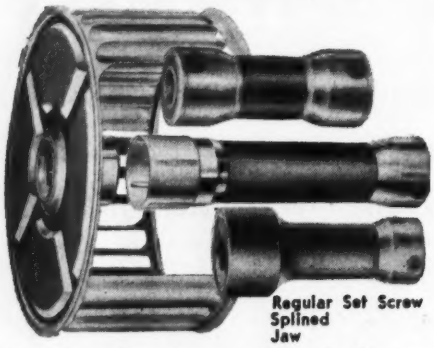

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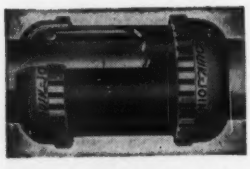

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and many others which have benefited his company. In addition, he has seen fit to share his ideas and results with others in the oilheating industry. He is a past president of the Indiana Independent Petroleum Association, has been a director of the National Oil Jobbers Council and is decidedly active in OHI.

Aladdin Lamp Awards

P. G. Crewe, Webster Electric Co. An old timer in our industry, he has been with Webster for 43 years and as far back as anyone can remember has been an untiring worker for OHI. He is retiring as Institute vice-president representing the Accessory Division, but continues as a member of the board of directors. In appreciation of his contributions over the year as an Institute officer, member of its Executive Committee and in committee work, Pres is awarded the 47th Aladdin Lamp.

G. M. Marin, Sun-Ray Burner Mfg. Corp. Newly-elected as vice-president of the Institute for the Manufacturer Division, Gabe has been one of the spark plugs of OHI over many years, working as a committee member, on the board of directors and the Executive Committee. Behind the scenes he has set a fast pace for many of OHI's activities, projects and plans. For a fine job, it is a pleasure to award Aladdin Lamp No. 48.

Crewe

Marin

Fred W. Heaney, New York Oil Heating Association and Skaggs-Walsh, Inc. J. V. Resek, newly-elected president of Oil-Heat Institute of America, interrupted the program at this point to present Heaney with Aladdin Lamp No. 49. He cited Fred's accomplishments during his just-concluded first term as national chairman, Distribution Division and his other industry contributions as former president, NYOHA; former president, Massachusetts Oil Heating Association, member of the Fuel Oil Committee, API. Also his civic and community activities, including the presidency of the First Friday Catholic Club, New York City, Resek concluded, make Fred Heaney a worthy recipient of this award.

Heaney

Standard of New Jersey forms new fueloil Division

GEORGE SCHOENBAUM has been named to head the newly-created Home Heating Oil Section in the Marketing Coordination Department, Standard Oil Co. of New Jersey. The purpose of the section is to promote oil for comfort heating throughout the world.

Indications are that this new department will explore every facet of the market in terms of equipment, training, and service.

Gulf Plattsburgh Terminal started by B. J. Copeland

CONSTRUCTION has begun on a new water terminal for Gulf Oil Corp. in Plattsburgh, N. Y. B. J. Copeland, president, Thruput Storage, Inc., also Plattsburgh, has contracted to have the receiving and storage facilities ready by October 1st.

The development on Lake Champlain will include an unloading dock, pipeline, four storage tanks, truck loading racks and a dispatcher's office. It is estimated that the terminal will handle 15 million gallons of product per year, and that this will increase to 25 million by 1966.

fueloil & oilheat

Equipment Selling is the Key

Healthy Growth for Fueloil depends on Someone selling Burners and Units

by

F. C. Haab*

THE FUELOIL AND oilheating industry would be well advised to step up its energy in the direction of pushing equipment sales. As we see the situation today our economic story can be stated in three simple sentences:

1) Distillate heating oil is a profitable product at all industry levels;

2) The profit won't stay there in a soft market;

3) Healthy growth can come only through sale of equipment . . . who is going to do it?

The National Oil Jobbers Council devised an accounting system that lets the jobber members know the separate costs on individual products and as a result the individual product profits. In the past four years the profit on distillate fueloils, in percent of sales, has been three times that of gasoline.

Distillate Demand sags

This is the first season that distillate demand for heating, East of the Rockies, was lower than the previous season. There were 5.8% more burners in use during this last heating season . . . but the weather was more than 8% warmer than the year before.

Actually in Philadelphia we went down about 5%, indicating some growth against the season but still delivering fewer gallons of distillate than the year before. There is great uncertainty about the continued progress of distillate growth—and something must be done about it.

We have a mortality rate of about 10% each year and we have to make this up through sales before we can grow at all. If we didn't sell oilheating equipment in considerable amounts I don't see how we could expand at profitable prices. Our 10% losses include about 5% for bad credit or moves, another 1% for conversions to gas and 4% lost to other oil companies for a variety of reasons.

Some years ago when I was with Petroleum Heat & Power Co. one of my big problems was to make up the annual sales budget showing the burners we would sell by types and prices. I'd send in the estimate for 1,000 burners and it would invariably come back for 2,000, and we would sell them. Instead of employing 15 salesmen we'd get 30.

But when I talked to a major oil man about making up his budget for distillate, he felt that was the easiest part of his job. He would just phone the production department to find out what they would produce, and that was his budget.

Unrealistic Prices

Twenty years ago distillate was sold at the unrealistic price of 5¢ to 6¢ a gallon. At today's levels, I believe it is profitable at all points from the refinery to the dealer. I am told that the refiner's net-back now is close to that of gasoline.

But unless we have growth—and substantial growth—we will be after each other's volume and it becomes a vicious circle that will take out the profit. It should now become the fair-haired boy, nurtured and protected with our doing everything to make it grow.

Some oil people have said, "I don't know what you are excited about. We never did much before to sell distillate, and we sold all we could make; in fact we actually had to go out and buy some. We never did much to promote the sale of gasoline as a commodity. We didn't have to go in and advertise the sale of automobiles, and that is what you are asking us to do for oilburners."

The answer of course is that there is no competition for motor fuels . . . they have to buy someone's gasoline. If the Government with its problem of agricultural surpluses were to push the development of alcohol to operate motor cars it would use the excess grains and the oil industry might have a different slant.

The distillate picture is different; there is real competition today with gas and with the growing importance of electric heat. We must push for the customer today to buy someone's oil.

I don't know of any market in the East hit as hard as Philadelphia. This was a thriving market, second largest in the country, because large companies put emphasis on equipment sales. Selling was King! These were the days of hard selling.

Later some of the large companies disbanded their sales forces, believing that their No. 2 oil business would continue to grow without the problems of a sales department. It was true for a while, with little competition, but today there exists very real competition and we must sell again. We must reinvest more of our profits to be sure of the recurring yearly income that an oil heat installation brings.

Gas has outsold us only for the past three years in the nation, some of which is in the South where they don't use so much fuel. Gas has the statistics, while oil has the money to do the job if they want to.

Praise for Refiners

I am not condemning anyone; in fact at this point I'd like to sing praises to the men in the refineries for what they have done in the past year to improve distillate. I'm a salesman. I do not know what is in fueloil; it might be Virus-X. But I do know it's working. Fewer service calls, fires cleaner, strainers cleaner, less clean-up of boilers. In fact we have gone back on hundreds of jobs where we only cleaned the burner during the summer and had no call all winter. We made the good-will call to remind the customer that we service his burner since the time for contract renewals was approaching. Good oil gives the market more confidence for competing against other fuels.

Let's state again here our third point . . . Healthy growth can only come through the sale of oilburning equipment—who is going to do it?

You can't count on most of the plumbing, heating or furnace men to push oil heat any longer. They did a few years ago, but many are now push-

*President, F. C. Haab Co., Philadelphia, one of the industry's largest fueloil marketers. This is a summary of a talk before the API Marketing Div., at its Atlantic City meeting.

Fred Haab says

***Distillate is a profitable product**

***The profit won't stay there in a soft market**

***Healthy growth can only come through sale of equipment; Who is going to do it?**

ing gas, and there are good reasons.

1) The cost of gas equipment is less.

2) They get very active cooperation in publicity and promotion from the local utility. He gets on the bandwagon.

3) They have less service requirement, principally because the utility will answer a no-heat call for obvious reasons; it "services the flame."

4) They get rid of handling an oil tank; then the gas permits are generally easier to secure.

There are thousands of these little fellows who formerly pushed the sale of oilburners now selling gas. Somebody must do our selling.

The oilheating equipment manufacturer has not been making much money. Most of them are principally interested in selling fabricated steel, whether it be for oil of gas heating. It makes little difference to him. He is realistic; he switches with the market opportunities.

Pessimistic Attitude

Really, most oilburner manufacturers are a little pessimistic about oil; they see their gas sales going up. We must correct this. The pessimism of the oilburner manufacturer should be changed by the sales drive that the oil man puts behind oil equipment. This selling must be done by using some of our profits from distillate sales. No one else will do it.

I do not recommend that major oil companies get into the oilburner business, but they do have tremendous influence with the independent marketers, who can do the job. We ourselves are doing more today than we had for years. In order to attract and hold a good salesman we pay ½¢ per gallon commission on the oil delivered to the heating jobs that he sold as long as he keeps the account healthy.

Today, oil men are selling just about half of the new equipment jobs. It cannot be too many years before most of the remaining 50% must be sold by the oil men or it won't be sold.

I know of a small Pennsylvania town where two oil companies sell and service oilheating equipment. The other oil jobbers or consignees in the country are putting a lot of pressure on these two to stop the equipment business as unfair competition. It's rather bitter. What they really mean is that the two selling equipment are growing faster. Some carry the feud to extremes by dropping their price a half cent to try and balance the better customer loyalties of the two equipment sellers.

Yes, there's no getting around it. Equipment selling is the key to a strong, healthy distillate market. And equipment selling needs your enthusiastic endorsement and support on a stronger scale than has been visible up to now. We think in your own best interest, you'll supply it.

And the very next time you see an oilheating equipment salesman, gentlemen, step aside and bow low!

Warm air technical Conference features summer Airconditioning

THE SECOND technical conference sponsored by the National Warm Air Heating and Air Conditioning Association, Cleveland, Ohio, featured presentation of 14 technical reports covering most facets of residential airconditioning. In four sessions the papers discussed research and development in the immediate future, factors in estimating operating costs of airconditioning, control methods in airconditioning, air cleaning methods.

The work of the Technical Data Committee was discussed by R. J. Waalkes, Association application engineer. He examined the work done in compiling a catalog of physical and statistical facts to be used as a basis for future system design. Such a technical data book is intended to provide a single source for the development of all new manuals or proprietary systems and is not specifically an application manual.

On costs of operating summer airconditioning, the speakers demonstrated that they cannot be estimated without evaluating the specific application. For example, H. C. S. Thom, Dept. of Climatology, U. S. Weather Bureau, proposed that since heating costs can be estimated from a degree-day system, the same measurement could be applied to cooling. But, since humidity is an important factor in temperature or discomfort, he proposed that degree-days be given in terms of "sentient temperature," or the dry bulb temperature plus an additional number of degrees to approximate the effect of humidity.

R. A. Gonzalez, Airtemp director of technical services, showed that all other things being equal, the human factor is so variable that in one case a number of families living in identical houses in the same neighborhood experienced cooling operating costs ranging from a high of $55.10 to a low of $12.86 for a three months' period. Average cost for this three-month cooling season was $34.86.

"The humidity Problem," discussed by Prof. S. C. Hite, Dept. of Engineering, University of Kentucky, probably accounted for much of this wide variation. He outlined a research problem which measured the amount of moisture released into the air of a structure by a family of four in their normal living activities. He cited a long list of humidity sources—2.4 lbs. of water vapor from mopping up an 8 x 10 ft. kitchen; 5 lbs. of water vapor from a day's cooking and others. In nearly every case, the addition of humidity was accompanied by an additional release of heat. The report included an evaluation of three methods of venting this moisture and heat load. Full application of the information undoubtedly would reduce the effect of human factors in summer airconditioning operating costs.

Prof. Konzo, University of Illinois, outlined problems in cooling the upstairs in two-story and tri-level houses.

Complete transcripts of these and papers presented at two other sessions of the conference can be ordered from the Association, 640 Engineers Bldg., Cleveland 14, Ohio, at $10 a copy.

Tale of Three Cities

Depth Interviews of three Markets point the Way to marketing Success

by

Fred Burroughs*

IN BRINGING you some significant information on heating oil versus gas heat marketing conditions, I am faced with an alternative: I can tell you a little about many markets areas or, relatively, much more about a selected few (though typical) areas.

So I have decided that my best service lies in a rather intensive scrutiny of some information Oilheating Market Reports has gathered in three cities, typical of three different-sized markets in the East. This procedure offers a workable thesis and one which I believe develops interesting conjectures and conclusions.

Before I dive directly into that subject, it may be useful to outline some of the activities we are undertaking in Oilheating Market Reports.

Roughly, our function is to promote the establishment and development of cooperative local programs for oil heat. Currently, in this work, we are dealing with 30 separate markets, in each of which an active cooperative promotional program for oil heat is now underway. We preceded this activity with a fairly searching investigation into the market characteristics of each area.

Now that the programs are well organized we are delving into a new and intriguing field—the sampling of consumer attitudes.

In our initial work with the various markets, we charted the general dimensions of these markets, documenting our findings in a series of "Initial Market Analyses." The correlation among these varied market conditions, geographically, has been most interesting.

We find in the Midwest an entirely different note from the tone exhibited generally in the East along the Atlantic Seaboard. The principal differences—Miswest to East—may be categorized as an unbalanced fuel-cost ratio (gas cheaper than oil) in the Midwest; a closer parity in the East.

In the Midwest a number of off-beat marketing practices have evolved. For example, it is common practice in central states' oilheating operation to handle little, if any of the oilheating equipment installation and service business. This is principally the province of the plumbing and heating dealer, the specialized service firm, in those areas. Another marked point of variation exists in the high degree of involvement of Midwestern heating oil dealers with gasoline distribution. In the East, the hitch their business stars to just one side of the petroleum product story—the heating oil field.

We have made three "consumer attitude" surveys in three typical oilheating markets. They are: Baltimore, Md., (population, 1955—1,350,000), Hartford, Conn., (population, 1955—612,000) and Niagara Falls, N. Y. (population, 1955—97,500).

These studies have been quite searching. We took the pulse of some 1,400 respondents, in random cross-section of the opinions of single-dwelling-unit residents. This was done, via telephone interview, by a corps of industry volunteers in each market.

The interview reports, themselves, were fairly easily developed. The tabulation and interpretation was considerably more difficult. For instance, one question alone involved over 7,000 separate tabulations. In the three studies, this single correlation necessitated at least 20,000 total entries. There were 29 different questions on each questionnaire sheet (although not all of them ran to this voluminous tabulation).

I mention this detail because I want to impress upon you the extent of investigation that backs these three com-

(A)

INSTALLATIONS, OILHEAT/GAS HEAT AT END OF 1955

	BALTIMORE, MD.	HARTFORD, CONN.	NIAGARA FALLS, N.Y.
OILHEAT:	211,942	66,728	18,000
GAS HEAT:	90,000	4,777	2,700
%. GAS TO OIL INSTALLATIONS:	42.5%	7.2%	15.0%
NATURAL GAS INTRODUCED:	1950	1954	1954
GAS COST VS. OILHEAT:	HIGHER*	HIGHER	LOWER

* INSTALLATION SUBSIDIES TO BUILDERS CHIEF "BAIT" IN GAS MARKETING APPROACH

(B)

PERCENT OF USAGE, OILHEAT/GAS HEAT BY PERIODS OF RESIDENCE

	PERIOD OF RESIDENCE	% OIL	% GAS	% COAL
BALTIMORE, MD.	5 YEARS OR LESS	40.2	78.4	20.0
	5+ YEARS OR MORE	59.8	21.6	80.0
	TOTALS	100.0	100.0	100.0
HARTFORD, CONN.	5 YEARS OR LESS	49.1	30.0	39.1
	5+ YEARS OR MORE	50.9	70.0	60.9
	TOTALS	100.0	100.0	100.0
NIAGARA FALLS, N.Y.	5 YEARS OR LESS	42.9	36.7	29.1
	5+ YEARS OR MORE	57.1	63.3	70.9
	TOTALS	100.0	100.0	100.0

*Associate Director, Oilheating Market Reports, New York, N. Y.

(C)

PERCENT OF USAGE, OILHEAT/GAS HEAT BY HOME VALUATIONS

	HOME VALUATIONS	% OIL	% GAS	% COAL	% TOTAL
BALTIMORE, MD.	$4 – 8,000	11.9	11.5	76.6	100.0
	8+ – 15,000	36.2	44.6	19.2	100.0
	15+ – 20,000	63.6	36.4	—	100.0
	20,000+ & OVER	49.1	26.4	24.5	100.0
HARTFORD, CONN.	$4 – 8,000	10.8	—	89.2	100.0
	8+ – 15,000	20.6	34.4	45.0	100.0
	15+ – 20,000	43.0	32.5	24.5	100.0
	20,000+ & OVER	54.3	45.7	—	100.0
NIAGARA FALLS, N.Y.	$4 – 8,000	26.2	27.0	46.8	100.0
	8+ – 15,000	34.9	20.7	44.4	100.0
	15+ – 20,000	29.4	43.7	26.9	100.0
	20,000+ & OVER	45.4	41.3	13.3	100.0

parisons. When you see a figure in the charts, I hope you will agree that it is not some arbitrary index, arrived at idly. It represents the essence, or boil-down of hundreds, yes, thousands, of consumer survey responses.

First, suppose we look at the fuel cost levels in these three markets. In the chart are plotted tank-wagon No. 2 fueloil prices, from 1950 to the present. These are graphed in red, for our three areas. They represent conversions from the tank-wagon price to the per-therm equivalent cost, per gallon (price per gallon divided by 1.4).

In black are shown the trends in the cost of gas for space heating—also converted to cost per therm. Arriving at these costs is a bit trickier than it looks, for I have first eliminated the initial 25 therms of gas usage—on the over-generous assumption that gas is always used for cooking and water heating. This, of course, drives the remaining space heating consumption toward the lower rate-bracket steps. You will note, too, the advent of changeover from manufactured to natural gas in each area. This necessitated provision for the change in per-cubic-foot Btu values in determining costs per therm.

Future projections as to trends in gas heating costs should not be made from this chart.

Gas rate structures are conceived with a view to marketing strategy. Historically, they embody "come-on" tactics in their conception. Obviously, their purpose is to entice usage to the point where wholesale purchase commitments are fulfilled, and distribution loads reach a payout point against investment costs.

The never completely-attained paradise for the gas man, is a market that takes all of the wholesale supply—year 'round, evenly—and in which all the distribution lines are delivering gas usage at capacity, or nearly so. (This is over-simplification, of course, but, essentially, the obvious, in gas marketing economics.)

Toward this "ideal" objective, gas rates are set up as manipulating devices, to encourage or inhibit usage in the greatest overall net revenue direction.

Thus, as distribution lines approach their capacity, three avenues for action appear—to add distribution facilities (a sizable investment decision); to restrict usage by edict, to keep it within supply and distribution limits; or to manipulate rates so as to discourage unwanted usage. When the lines are full, with level loads, the utility's stockholders are happiest.

Another factor in the offing is pending legislation of the type proposed in the defeated Harris-Fullbright Bill, to free gas wellhead prices from FPC (governmental) jurisdiction. Such legislation is destined—its result can only be to increase gas prices to the consumer.

Thus, if you will forecast, gas prices to the user eventually point upward. The timing depends upon the particular stage of development of a particular utility's market; also upon the effect of external economic forces, such as legislation.

In our three guinea-pig cities we find varying stages of development in the competition's market penetration.

Baltimore exhibits a maturity in exposure to natural gas; the other two areas are currently on the threshold that Baltimore has already crossed.

This condition is illustrated in TABLE A, showing percentage of usage, gas heat to oilheat, from OHMR estimates in the three markets.

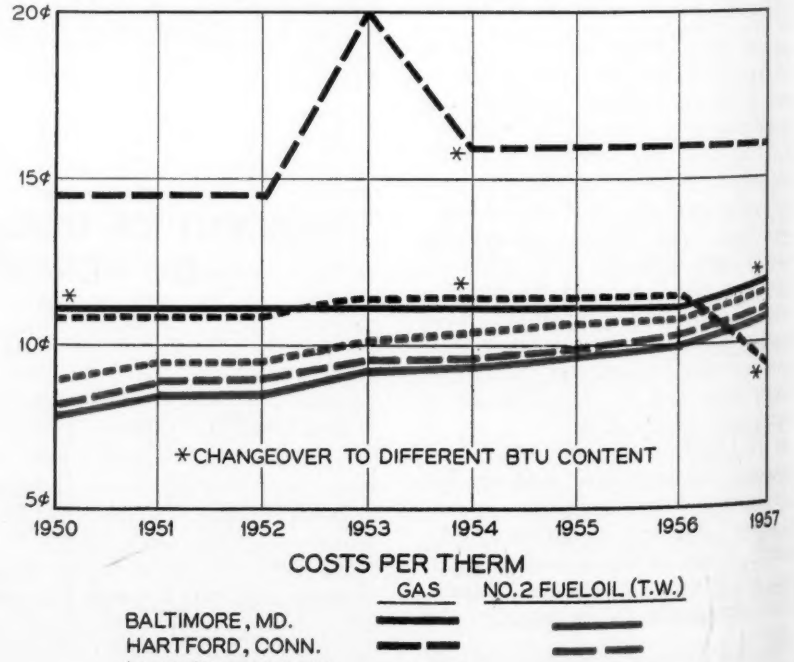
This unhappy little portrait shows the situation. At the bottom, I have labelled, descriptively, the general level of fuel cost ratios in the three cities. I have indicated this descriptively because, over the several years of a competitive fuel market's development, the comparative fuel-cost ratio at any single date is not significant. In a previous chart the actual relationships were shown, year to year.

Now that we have some surface aspects of these three markets defined, let's unveil one of the most interesting findings from our consumer surveys.

In the next table we have tabulated the usage of each fuel—oil, gas, coal—

A FUEL COST COMPARISON IN 3 EASTERN CITIES

(EQUIVALENT "PER THERM" COSTS, GAS VS. NO. 2 FUELOIL, 1950-57)



against period of residence. Two arbitrary periods are set up—"5 years or less," and "5 years or more."

With some limitation, this separates "new" homes from older residences. (While an occupant may have moved into an older home and still have lived there 5 years or less at the time of the survey, this separation will, in practice, divide according to the actual age of the dwelling unit.)

Gas heating market development can be likened to the three stages of geologic evolution. In its "youthful" period the terrain is rugged. Tactics, like mountain streams, are bold, brawling, aggressive. Their course tears away at obstacles. In the "middle-aged" period, channels have been cut. Flow, and force, become more leisurely. Peaks and valleys become more levelled.

In the last, or "mature" stage, the terrain becomes nearly level. Obstructions have been ground down. The pace settles to a less aggressive, complacent tempo.

In these three sample cities we detect two of these "evolutionary" periods.

In Baltimore, signs of transition to the "mature" stage are apparent. Gas has accomplished its load objectives to a degree. The evidence is unmistakable in its capture of the new home market.

As a side comment here, I might say that in Baltimore a unique condition has accelerated the penetration of gas heat. There exists in this city somewhat of a residential phenomenon—the row house—built on land which is not sold to the homeowner, but rented under a peculiar system of "ground rents."

Growth Patterns

This has resulted in a rather cheap house construction, home-side-by-home, row-after-row. This was an uniquely fertile field for encroachment by gas.

In Hartford and Niagara Falls, however, the period is in a much more youthful stage. There gas has not attained its goals. Oil heat is the undisputed leader. The new home market has not been captured. The overbalance of gas heat usage in older homes is a carry-over from earlier manufactured gas usage.

Our next comparison is from a different viewpoint. In TABLE C we have measured usage against home valuations.

Here we see another pattern. In the "old" market of Baltimore, gas heat usage seems to be concentrating in the "middle-class" home valuation bracket. In the "young" cities, Hartford and Niagara Falls, there remains an important concentration of gas heat usage in the higher-priced home fields. In the Falls, where a special stimulus exists (in cheap gas rates) we see some penetration already into the low-cost housing field.

BALTIMORE'S "LUXURY" PROGRAM
OUTDOOR BILLBOARD
Of course it's a luxury home... it has modern OIL HEAT!
SMALL SPACE NEWSPAPER ADS
Of course it's a luxury home...it has modern OIL HEAT
Of course it's a luxury home ...it has modern OIL HEAT
LEAFLET

I must make some explanation of the process by which these figures were derived. In each of the three areas, we have seen that oil heat usage is numerically greatest.

What I wanted to show here is the level of usage for each fuel in relation to the various home-valuation brackets. In other words, an arithmetical projection of gas heated and coal heated homes has been made, to the equivalent of the number of oilheated homes in each city. The percentage of usage of each fuel in each valuation bracket has then been calculated to show the extent of penetration by each fuel into each economic level of housing.

To me, these figures are most significant.

I could leave it at that, and let you draw your own conclusions from these research statistics. Or I could give you additional findings and consider this paper as another abstract in contribution to the accumulating market data on our industry.

Instead, I'm going to go out on a limb with a hypothesis, or proposal, in the spirit of leaving you with some constructive suggestion for applications of these survey results.

On the other hand, mine will not be an originally conceived proposal. Baltimore has already arrived at the conclusion I shall submit. It's the Luxury appeal.

It's not my purpose to tout the thinking of any particular group. In this case, however, Baltimore's new program completely illustrates what my conclusions point to.

You see, we are really interested in holding and expanding our oil heat market in all directions, among all economic levels.

But we can now point to a clear popularity of choice in the above-average home valuation field.

Most homeowners are follow-the-leaders. They ape the luxury home owners in the appointments they demand in their homes—present or future.

We've seen this in the case of planned kitchens, in-the-wall ovens, wall-to-wall carpeting, recreation rooms, and other "extras" yesterday's development houses didn't offer. Today they're standard equipment in competitive "development-type" homes.

Oil heat wants that niche of extra desirability. The rewards in achieving that position of preference—if skillfully and soundly planned—can hold and strengthen oil heat's place as the fuel of choice in the better home. In doing this, oil heat beckons to the owner of the middle-class bracket and low-cost home.

This, then, is one approach, illustrative of how a more enlightened marketing knowledge of our trading area characteristics, and the current position and trends of the competition, can help us chart our promotional courses.

I am one who believes that the soundest and most effective programs in merchandising and promotion must be based upon the assembly and interpretation of marketing facts and factors. Good generalship, in winning wars, depends upon proper intelligence, careful planning, effective logistics, and top-flight strategy and tactics.

Here Equipment outsells Oil

After starting in Fuel, the Southside Fuel Oil Co. found major Rewards in Heating and Cooling Sales

IT WAS A LATE SPRING meeting in Jacksonville, Florida, of the Fuel Oil Dealers Assn. of Duval County . . . not a meeting in the general sense but rather some of the large marketers had gathered with representatives of major companies to consider the need for an advertising campaign similar to those in other cities. The editor, as director of Oilheating Market Reports, New York, was down for the discussion.

Because Florida oilheating conditions are so different from those of the north, one approach to understanding this market might logically be spending a few hours with an individual dealer to see how he operates. One of the key men at the gathering volunteered the information that the president of the Association, John Kirkpatrick, had built up quite a distinctive oilheating business in the past few years, calling it the Southside Fuel Oil Co.

This proved to be a very interesting operation. Not only is it a combination oil and equipment firm, but the equipment department is the larger and more interesting part of the business.

Leaving the Air Force at the close of World War II, Kirkpatrick started in 1946 this fueloil business in the southern portion of Jacksonville, which means that it's across the wide St. Johns River from the business district.

In the 11 years since then, he has built a volume of 1½ million gallons of No. 2 oil and kerosene, and nearly every gallon came from the sale of some kind of oilheating equipment. That is not a big volume, but it's more impressive when you notice that the average annual sale is only around 500 gallons to the customer, so there are 3,000 customers. About 60% of the gallonage is kerosene where the typical user with pot-type equipment burns 450 gallons. The other 40% is in No. 2 oil with an average consumption per account of 550 gallons in a normal season.

Naturally in a mild climate area, like Jacksonville enjoys, the "normal" season is hard to recognize. This past winter was very mild, with degree-days only 854 against the weather bureau normal of 1,243, down 31%. The 1955-56 season was extra cold, with a two-week dip in January that took half of the whole season's demand.

Under such unpredictable conditions it is logical that the fueloil men need more operating margin than in the more orthodox markets. Today they have 4.9¢ on No. 2 oil which sells at 16.8¢ for residential use. Large commercial users get discounts.

After Kirkpatrick had been in the fueloil business a relatively short time he concluded that taking customers away from someone else was the hard way to do it. If he sold his own equipment, he reasoned, he would get most of the oil business that he created.

Through the years he has come to spend considerably more of his time in that end of the company with results that might be expected. He has done a lot of new home heating (and cooling) for builders in the area who have learned through experience that it pays to spend the necessary minimum price for dependable performance.

When asked about his volume of heating equipment sales, Kirkpatrick said, "Let's take the peak year and then recognize that it's down some since then because new building is down." The peak was 1955, when he brought in from northern factories and installed ten carloads of heating equipment. There were in the lot 200 central heating furnaces, a few more than

Sales engineer Tony Wilhelm checks a new five-ton home cooling job. He makes a layout plan for every installation. In addition to Wilhelm, Kirkpatrick sells and there's another salesman.

New showroom and office building helps attract business, and makes it more enjoyable when they get it. Storehouse, duct shop and oil tanks are on the same property, out of the picture to the right. Southside Fuel makes equipment sales a specialty.

that number of pot-type wall furnaces for simpler houses and about the same number of circulating space heaters sold.

For the typical Luxaire oil furnace sold to the builder, including complete duct work made in his own shop, he gets about $775. They can buy for less but they come back to him. For the pot-type wall furnace which installs in a closet and does a good job for a small house, he gets from the builder around $225. He can put this job into an old home including some fitting and framing-in with wallboard for $300.

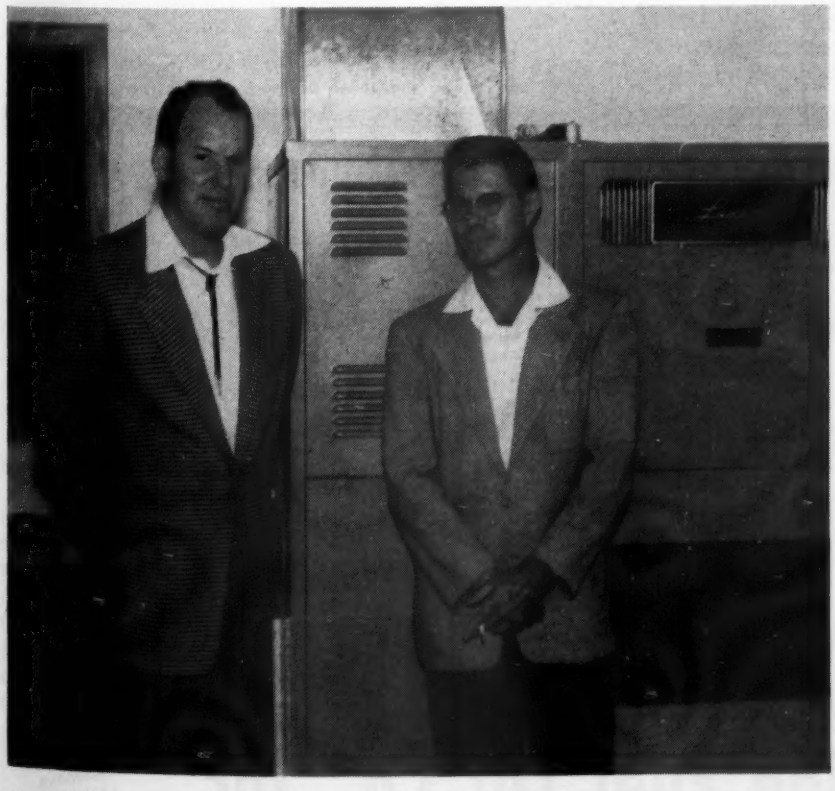
Most furnace installations today are made in attached garages, although local ordinances require an enclosed room or area for this. People have grown dissatisfied with any unit that makes any noise near the living quarters, so the builders insist on the remote location. Of course due to the seashore limitations there are almost no basements, so the former practice had been to put the furnace in a utility room or closet near the center of the house.

Years ago few Florida homes had central heating, but Kirkpatrick says that now in order to sell an old house of any size or value the owner finds he must first put in a furnace.

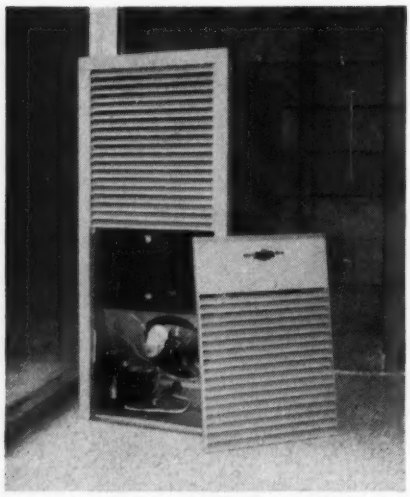
The heating jobbers don't stock much of the heavier heating equipment in this market, so the dealers like Southside Fuel Oil will ship in their larger items from the north. Kirkpatrick says it's necessary to keep a good stock in hand of almost everything needed, for otherwise you can get bad relays, particularly bad with builder business.

The oil business, grossing a quarter million dollars a year, is now just about 40% of the company's total billing. The rest is heating, cooling and service.

Jacksonville has five months in the year when heating is needed, five months when cooling is a big help, and two spring months that need neither facility. Thus cooling is getting to be a big business. Commercial buildings are 90% equipped.



John Kirkpatrick, president of the Fuel Oil Dealers Association of Duval County on the left, with Howard Vollers, secretary-treasurer of the Association, photographed in the showroom of Southside Fuel Oil Co. Vollers is manager of the fueloil department of E. G. Golder Co., oldest heating and fueloil company in the market, starting in 1905.



Wall furnaces are popular for smaller homes, do a good job when expertly installed and serviced. Kerosene burning types do considerably more than half of the heating in Duval County, so the oil company service departments have learned how to handle them. When they have 110 gallon storage or better they are usually put on automatic deliveries. Southside Fuel sells these jobs to the builder for about $225. Installed in old homes they cost complete just about $300.

About 10% of the new homes are getting complete airconditioning. More important perhaps is the fact that every new home of any size at all is having its ductwork installed for both heating and cooling. On some jobs Kirkpatrick actually puts in the combination heating-cooling unit without the coils.

Up to this year 100% of his cooling work has been in new homes. Just recently has he started promoting it for existing homes. As a result he finds about 25% of this years jobs are add-ons to old furnaces; this ratio will grow now that he's going after it. His cooling sales in 1957 will total between 70 and 80 jobs.

Oddly enough, there seems to be a sort of social level where airconditioning fits. For example, the Veterans Administration will not allow cooling equipment to be included in their mortgage financing where the house has less than 1,200 sq. ft. of floor space. It's not so much that the buyer can't make the payments on the house but that they think he can't afford the extra cost of airconditioning operation.

Asked what he thinks it costs to run a cooling system, Kirkpatrick puts it this way: "Let's combine heating and cooling and say that it averages between $20 and $25 a month the year around for all costs connected with both . . . for fuel, current and service."

In an industry like oilheating where we so often hear an oil man criticized for selling equipment too cheap to get the gallonage, it's always refreshing to meet men and companies like this one where equipment is the first love and first profit, with oil revenue the continuing reward for customers well served.

Ads like the one below run in the real estate section of the local paper.

Luxaire Air Conditioning Can Be Added To Your Present Central Heating System

GEO. WELLER
WALTER R. CRABTREE
J. T. WEBB
NORTHSIDE HOMES
H. H. ELARBEE
PEARLWOOD CONSTRUCTION CO.
IRA C. BERGER

JACKSONVILLE'S OUTSTANDING BUILDERS OF QUALITY HOMES SELECT

H. H. ELARBEE, Jr.
DRURY, INC.
GEO. A. BERRY CONSTRUCTION CO.
HALDAN CORP.
VICTOR HART
HALL ENTERPRISES
JOSEPH O. SHAFFER
SHERBURNE-EASTERLING

Luxaire

HEATING & AIR CONDITIONING

MEMBER OF Natl. Warm Air Heating AND Air Conditioning Assn.

Exclusive Installing Distributor

Southside Fuel Oil Co., Inc.

3021 OLD ST. AUGUSTINE ROAD PHONE EX 8-6491

The hot-water Furnace

Warm-air Furnace provides Heat and year-round hot Water; has built-in hot-water Tank

by
J. W. Schulz

"GET IN HOT WATER!", an article in the July issue of FUELOIL & OIL HEAT, told why farsighted oil heat enthusiasts declare that in oilheated homes the hot water for faucets should be heated by fueloil.

The article concentrated on new homes heated by oilfired warm-air furnaces, and on aiming to equip these with self-contained water heaters fired by pressure oilburners. It suggested that such water heaters should be made available to builders of new homes for $200 installed price—specifically to advance the use of fueloil for heating.

Homes heated by oilfired boilers present no water-heating problems. Steam and hot-water heating boilers which are oilfired are equipped almost without exception with indirect water heaters.

How can you provide oilheated hot water for a home heated by warm air without installing a self-contained oilfired water heater? You can install a furnace, a warm-air furnace fired by oil of course, which provides year-'round hot water.

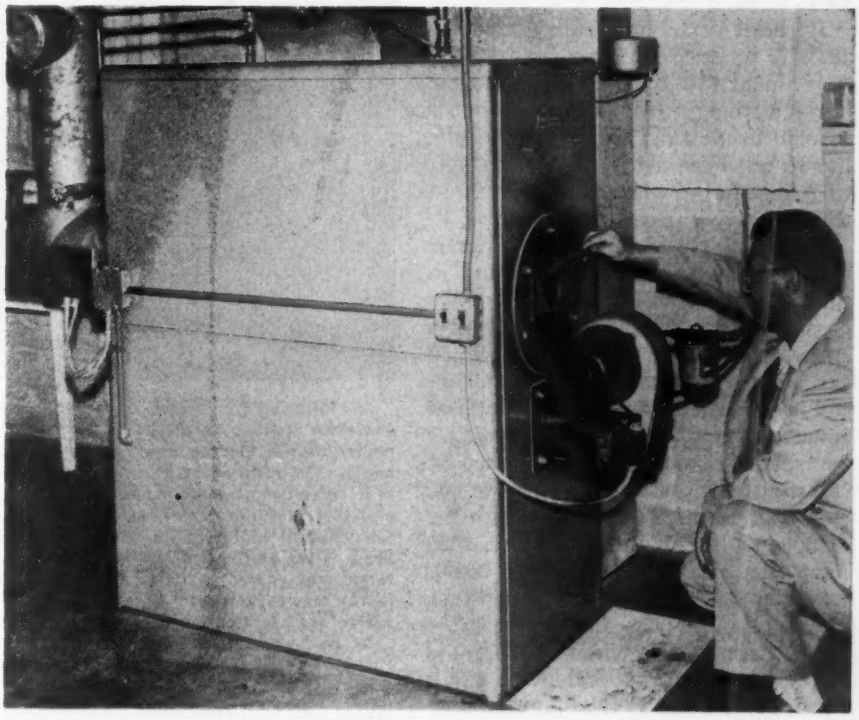
Waterair Co., Medford, Mass. makes such a furnace. Fred DeAngelo and his two sons recently bought the Metromatic Manufacturing Co., which for years made this furnace and gave it the original name of Metropac. Fred DeAngelo changed that name to Waterair.

Comes in three Sizes

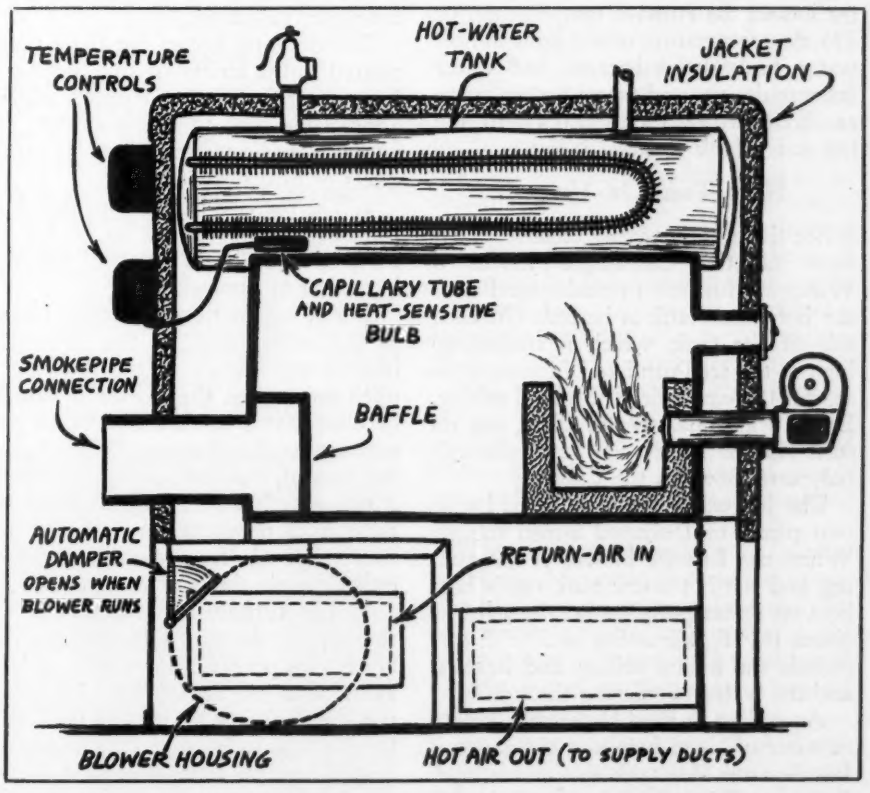
Accompanying illustrations show the furnace. It's made in three sizes of a DeLuxe line. The smallest is fired at 1.00 gph and contains a 30-gallon hot-water storage tank. Next comes a 1.35 gph size having a 40-gallon storage tank. The largest is fired 1.95 gph, has a 50-gallon hot-water tank.

The most interesting part, to me, of one piece of literature on these DeLuxe models is a set of numbers indicating the approximate stack temperature of the 1.25 gph model is 425°F., and of the smallest and largest models is 450°F. I understand this is actual reading of gross reading of the stack thermometer—not net reading, which is the stack-thermometer reading with 70°F. room temperature deducted from it.

I like these stack-temperature figures in a piece of furnace literature. For years, FUELOIL & OIL HEAT editorials



DeLuxe Metropac, exceptionally neat and clean, is in a basement used as a hobby room.



Sketch shows what's inside a Challenger model Waterair summer-winter warm-air furnace. When the hot-water tank needs heat, it gets it from two finned heat pick-up tubes, U-shaped, one shows in the drawing. Actually the furnace contains two, one on each side of the hot-water tank. These finned tubes receive heat from air as hot as 350°F., and have enough surface to give them the heat-exchange equivalent of 135 sq. ft. of hot-water radiation. Though the tubes are heated by 350°F. air when the tank needs heat, and when the circulating blower is not running, the maximum temperature of warm-air for the supply ducts of the heating system is about 170°F.

and feature articles have preached that dealers putting in new oilfired furnaces and boilers should engineer towards suitable stack temperatures, not be surprised at the stack-temperature readings they take when they start up new jobs.

If these Waterair DeLuxe furnaces actually produce stack temperatures of 425°F. and 450°F., their manufacturer has something to boast about and is correct in putting the figures in the literature. That avoids a dealer's getting a surprise when the combustion tests a newly started furnace.

The DeLuxe models of Waterair furnaces have a feature not found in the Challenger models which will be described presently. This feature is a special by-pass damper control, which can be operated manually or by a control motor. In summer when no heat is needed, an owner moves this damper control to its summer position. Then he can use the furnace's air blower to circulate air through his home. With the damper set for winter, of course, running the furnace's air blower causes warm air to come from supply registers.

On all Waterair installations, the room thermostat is wired to start and stop only the furnace's blower motor . . . it's not wired to the oilburner control circuit. The oilburner starts after (1) running the furnace blower in winter lowers the furnace temperature, or (2) the temperature of the built-in hot-water tank drops because hot water is being drawn, and therefore the burner should run to put Btu's into the hot-water tank to keep it hot.

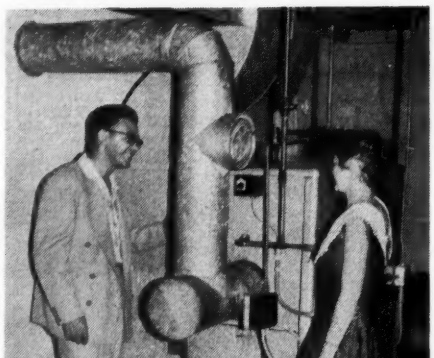
How Tank is Heated

See the accompanying cross-sectional view of the Challenger model o Water-air furnace to understand how the hot-water tank is heated. On each side of the tank, which is tucked up high in the well-insulated furnace jacket, is a U-shaped piece of finned tubing. Each furnace has two of these, one on each side of its storage tank, through only one shows in the drawing.

The hot-water tank is heated by its two pieces of U-shaped finned tubing. When the furnace blower is not runing and the hot-water tank needs heat because its temperature is falling below about 160°F., air as hot as 350°F. surrounds the finned tubing and heats it and the water circulating through it.

According to Fred DeAngelo, manufacturer of these furnaces, the result is fast heat-up of a tank that needs heat. In his smallest models which have 30-gallon hot-water tanks, he says, in 70 minutes the temperature of a cold tank is raised by 90°F. temperature rise.

This performance, he explains, is the result of using in these small models 10 ft. of finned tubing to heat the water; he says that on a basis of 160°F. water temperature the 10 ft. of tubing is the equivalent of 135 sq. ft. load of hot-water radiation.



A Metropac (or Waterair, to use the new name for it) has so much water-heating capacity that it can be used mainly for water heating. In addition to heating the tank within it (which can be either galvanized or monel metal) a Metropac can heat an external tank. One 30-unit motel has a Metropac furnace fired at 1.0 gph, which heats a 200-gallon external tank as well as the 30-gallon tank inside it. The set-up provides hot water for the entire motel, but heats only two offices.

The drawing brings out these points related to the ability of this furnace to heat water in summer without sending appreciable heat to the basement, and without sending warm air to its supply ducts or return ducts:

1. The furnace jacket is insulated uncommonly well—it has to be for the furnace to be at all practical for heating water in summer.

2. An automatic air damper, located in the outlet duct of the circulating blower and shown in the drawing, is open only when the blower is running because heat is needed. Blower air pressure opens this damper. When heat is not needed, this damper remains closed; it prevents flow of air through the furnace and prevents any of the furnace's hot air from sneaking towards either supply ducts or return ducts.

3. The furnace connections for both the supply duct and the return duct are low as possible, down at floor level, as the drawing shows. That helps keep the furnace's hot air bottled up high in the furnace jacket when water must be heated but no heat is needed for the rooms of the house.

Because the base is not heated, incidentally, this furnace is UL approved for installation on a wood floor—it can be installed in an attic, for example.

Other points about the Challenger line of Waterair furnaces:

As the drawing shows, they can be described as flueless, for you can say all the heating surface is direct—unless you want to count as indirect heating surface the short smokepipe, which is in an air stream, and the small area enclosed in a little flue-gas baffle at the inlet to the smokepipe.

The manufacturer's descriptive literature does not list stack temperatures for Challenger models, as it does for De Luxe models.

On the plus side, the Challeger models do feature soft-brick fireboxes, do have extreme down-drafting with smoke outlet centers even below the centers of their fireboxes, and have no small flue passages and thus (helped also by their soft-brick fireboxes) don't need yearly vacuuming to remove soot from flues.

The Challenger is made in two sizes. A 30-gallon hot-water tank is in the small size fired at 1.0 gph; a 40-gallon tank is in the large size fired at 1.25 gph.

To obtain information on equipment dealers' experiences with these furnaces, which most dealers still call Metropacs as Fred DeAngelo only recently changed the name to Waterair, FUELOIL & OIL HEAT questioned several dealers by mail. Every dealer but one reported good results from the Metropacs he had installed. Details of the good and bad comments come next.

Dealers' Comments

One dealer said that starting in August, 1951 he installed 157 Metropacs. They cost him $115 more than furnaces of equal quality but lacking the hot-water feature. During the past year, 95% of the furnaces he installed were Metropacs with the year-round hot-water feature.

This dealer, located in New York State charges a homeowner $200 more for a Metropac than for a usual forced-air furnace which does not provide year-round hot water. Most of his Metropacs are the 30-gallon tank size. He aims for 160°F. maximum tank-temperature, and says all his customers seem to get enough hot water. He's had no trouble because Metropacs have put heat into rooms in summer. A Metropac, he says requires no more service on a year-round basis than a boiler job providing year-round hot water from an indirect water heater.

This New York State dealer finds that one of his Metropac jobs, in providing year-round hot water, uses 200 gallons more fueloil a year than an ordinary forced-air furnace. He declares the Metropac idea is successful, and he aims to put his greatest selling emphasis on it this year.

A Connecticut fueloil and oilburner dealer sold Metropacs actively for only

two months in 1953, then turned to these summer-winter furnaces again in 1957, suggesting he is the cautious type. He sold 12 all told. This company says it pays $120 more for a Metropac than a forced-air furnace of similar quality that can't provide hot water.

During the four months of 1957 it actively advertised Metropacs, about half the furnaces it installed were Metropacs. Its customers pay $200 more for Metropac installations than usual forced-air installations.

This fueloil company aims for 150°F. maximum tank temperature on its jobs, has had no complaints about insufficient hot water, but comments that mixing valves seem necessary for Metropacs—suggesting it had complaints about hot water heated excessively rather than insufficiently. This company has found that a Metropac can provide all the hot water needed in a house in summer without putting any heat into the rooms.

Less Service needed

Answering a question about yearly service requirements, an executive of this fueloil company says a Metropac needs less servicing than a boiler set-up providing summer-winter hot water.

He also says a Metropac job takes 300 to 400 more gallons of fueloil per year (to heat water) than a typical forced-air furnace job takes—heating no water.

The idea is successful, he indicates, for it creates more attention than any other single sales feature in the company's line of equipment. A good volume of sales is anticipated, thanks to the unusual feature of the furnace's being able to provide excellent summer-winter hot water.

He concludes: "We have great hopes for this line. The public reaction is very favorable and the only objection is price. A gas water heater is cheaper, and the mass market gives this much consideration. Because this is a specialty item having much in it to talk about, good salesmen should welcome it."

A Long Island, N. Y. oil company started selling Metropacs in 1953, has installed 47, pays $120 extra wholesale price over the price of a comparable quality plain furnace, and charges its customers $200 more.

It says 98% of all the forced-air furnaces it sells are Metropacs now—most are small and have 30-gallon hot-water tanks. Its customers are completely satisfied with the amount of hot water they get. Water temperature aimed for is 150°F.

Like the other fueloil company, this Long Island fueloil company says a Metropac installation requires less service than a boiler installation providing summer-winter hot water. It declares most emphatically that the Metropac is successful, and backs this up by emphasizing this summer-winter furnace will be its primary furnace line.

One man only, the head of a fueloil company located in the suburbs of New York City, reported that bad things come of installing Metropacs.

He said, "This product turned out to be a real lemon. The main reason is no cooperation between the dealer and manufacturer. Replacement parts such as tanks take months to get."

He said the operation of the units he installed was "very bad because the controls do not give the proper heat, and during winter months the tanks become extremely hot and are damaged in 8 to 12 months."

He decided that for him a better bet lies in selling oilfired water heaters for homes heated by furnaces.

The thoroughness and enthusiasm of Joe DeBenedictis, who wrote FUELOIL & OIL HEAT the best letter it received about Metropac installations, cause him to be named here—with his permission—and cause him to appear here in photographs of his excellent installations.

Joe DeBenedictis owns the Patterson Fuel Service located in Carmel, N. Y., about 55 miles from New York City. Joe is modern about everything. About four years ago he pioneered in his area by being the first to provide two-way radios for eight of his motor vehicles—his own car and the cars his servicemen drive, and his fueloil trucks.

His throughness, enthusiasm and modern thinking make him a sincere admirer of the Metropac. Although Joe's organization is not large and does business in an area populated mainly by homeowners not in the upper income brackets, since 1948 he installed 300 to 400 Metropac units.

Explaining why he does not know exactly how many he installed, Joe says, "I forget many that I installed, because they need no service for years. Thanks to the nice soft-brick firebox and the absence of small flue-travel passages, often the furnaces don't even need cleaning for three or four years. I get a call from a homeowner whose Metropac finally needs my attention in three or four years, and suddenly I realize that long ago I sold him a Metropac."

Sales-minded Joe DeBenedittis, who appears in all these photographs, here looks over the Metropac on display in his showroom.

About 40% of Joe's Metropac installations include the Model 70 Challenger, fired at .85 gph and equipped with a 30-gallon galvanized hot-water tank. Joe DeBenedictis says this costs him about $90 more than a same-capacity typical forced-air furnace of similar quality. He sells it for $200 more.

Price Basis

He uses the same basis in figuring customer prices on Metropac jobs that he uses on straight forced-air furnace jobs, which seems to be cost plus 25% for overhead and profit. One of his big objectives in selling oilheating equipmen, of course, is to build up his fast-growing fueloil gallonage.

He adjusts for water-tank temperatures of 150°F. to 155°F. About customers being satisfied with the amount of hot water they can draw, he says that over the years 98% of his users have been more than satisfied.

Joe DeBenedictis adds these facts:

"Before 1950 I had several installations that under certain conditions would give warm air from the return registers during the summer. Since then the Metropac has been redesigned and I now have no complaints at all.

"The unit is very well constructed and needs very little attention. Thanks to the unusual design of the heat exchanger, and to the firebox made of insulating firebrick which I like, a Metropac Challenger doesn't need cleaning for several years. I find the limit of service to be an occasional new nozzle.

"I estimate the average installation uses approximately 150 to 200 gallons of oil a year to provide hot water.

"My experience with the unit has proved to me conclusively that it is successful. I can say that with peace of mind, having several hundred customers satisfied with and recommending the Metropac.

"Our operation here is to recommend the Metropac on new construction and in remodeling where the customer also is in the market for a new water heater; otherwise we recommend straight forced-air furnaces of several different makes.

Servicemen interviewed by FUELOIL & OIL HEAT were enthusiastic about one feature of the Metropac: It's oilburner is not only readily accessible, not in a dog house, but it's high up. It stays clean, whereas in a dog house it would not, and servicing it is a pleasure because no stooping, squatting, or bending is necessary.

It's a Good Business

The long range Outlook indicates Nothing less than unlimited oilheating Expansion

by Tom Carson

IN THE ATTEMPT to discover suggestions for the betterment of our business, I instinctively retrace my own experience over the past 32 years in this field in the hope of discovering from personal trial and error some suggestions which might be of value.

During this 32 years in the industry, I had the experience of operating my own business beginning in 1924 in the pioneering stage of marketing oilheating equipment. After approximately 8 years of this endeavor, circumstances and the trend of events warranted the transfer of my business to a much larger entity, which subsequently became a direct branch of one of our largest suppliers. Consequently, for approximately 25 years, I helped to develop a large retail fueloil business for the major supplier, and became reasonably well acquainted with the thinking and outlook of our industry from the supplier's viewpoint.

In January of this year, having reached the time of life when the retirement board took over, I opened my own business in Baltimore as a consultant. I hesitated to use this grandiose term, but could find nothing else better understood. One of my clients is the Oil Heat Association of Maryland, which is a chapter of the Oil-Heat Institute of America, and which has 135 company members in Maryland.

My whole purpose in mentioning this record is simply to convey the fact that I have been privileged to watch and observe the thinking and the efforts of practically all phases of the distribution end of the fueloil business beginning with the so-called "Peddler" up through the various brackets to the major supplier.

I have often wondered how many of us have gone to conventions and have been able to remember what was said by numerous speakers, after a reasonable passage of time. It seems to me, if my experience parallels the majority, that only occasionally did I hear a speaker who made remarks significant enough to make a lasting impression which I could not help but remember. Most of you have had this experience.

As evidence of that I tried to recall the most significant talk affecting our business in my span of 32 years in this business. Almost instinctively, there came to mind a talk by our mutual friend Jim Dyer, president of the Sinclair Refining Company, which was given before the API Marketing Division in Chicago three years ago. Quite a number of you in this room heard that talk.

I have called it Oilheating's Bill of Rights, and I would recall to you certain highlights. Real truths of highly significant nature need repeating, otherwise they may be lost sight of because of the human tendency to forget the good in a great many instances, but almost invariably to remember the evil.

Consequently, I would like to recount the fundamentals which Mr. Dyer set forth in his talk, to wit:

1. He made it clear that the development of the middle distillates by the petroleum industry and its importance to the industry as a whole had been long overlooked, particlularly with regard to home heating fueloil.

2. His next observation very definitely stated that the oilheating industry had grown up.

3. He paid marked tribute to the independent resellers of the nation for having done such an excellent job of selling oilheating.

4. He made decided mention of the fact that the aggressive and successful marketing tactics used by the oilheating industry were now effectively being used by the dispensers of natural gas.

5. He laid further especial emphasis upon the fact that natural gas was priced unrealistically at the well and could not long remain in this position, despite control of the Federal Power Commission.

6. He further appealed to the suppliers of the nation to aid and assist all fueloil marketers in each individual market where such assistance is needed.

The faith in this business on the part of the suppliers has been growing within the past few years with great strides. The best evidence of this faith in our industry has been the enormous investments placed in refining and distribution facilities to cover the needs and growth of the middle distillates, and most particularly No. 2 oil for home heating.

This is not the only expression, as has been evidenced by the research and collaborative effort put forth by the Esso Standard Oil Company with the Servel Corporation. The creation of a

sound piece of equipment as the new Servel Sun Valley all year-'round conditioner for both heating and cooling, with oil as the source of the needed energy, is the most significant development which has taken place in our business in the last 25 years.

The marketers of oilheating equipment have been yearning for something novel, something of an innovation, upon which they could expand, elaborate and dramatize. We now have it and Esso has urged all other suppliers to collaborate with manufacturers in their own research laboratories, looking towards accomplishing things equally as beneficial to the industry and to the public at large.

Period of Growth

If you will only visualize that within a period of approximately 10 years the remarkable growth that this country is bound to have, which will in turn require millions of new homes, then you can begin to realize what an enormous market is opening for the installation of year-'round airconditioned homes, plus the fact that oil can very readily take over this load as the prime energy agent for both heating and cooling.

Think of the effect upon adding a summer load to home heating, which hitherto has not existed with summer hot water hook-ups. Esso Research reports that within the next 10 years, with full exploiting on the part of the entire industry of the year-'round air-conditioned home with oil as the base heating and cooling agent, millions of barrels of the middle distillates will be used which otherwise may be lost to a competing fuel. This is one excellent way of improving our industry.

If you will carefully think upon the effort which has been going on between Esso and Servel, you will find that one word sticks out in the your mind, namely, collaboration. I have purposely emphasized this development because it typifies very clearly and forcibly what can be accomplished through collaboration. Another thing that sticks out in my mind is the fact that this Esso-Servel effort has gone beyond collaboration. It has entered the realm of selfish enlightment, in the sense that the major supplier involved in this effort has opened its laboratories to other manufacturers of equipment and has openly urged other suppliers to do the same thing. Collaboration of this nature will benefit the entire industry in which each contributor to the effort will find his own share of the reward.

For a good many years, and most particularly the early stages, the propagation of automatic heat with oil fell upon the shoulders of the manufacturers, and in the writer's opinion, they did a noteworthy and meritorious job. However, the very nature of oil heat equipment does not provide the glamour and turnover such as has been the case with the automotive industry. Consequently, the petroleum industry has been able to witness and enjoy a tremendous growth in automotive fuels without having to carry the burden of its propagation.

Regrettably, but factually, oilheating equipment manufacturers are not now, nor have they been for some few years past, in the position to fully carry on the load of research and propagation necessary to a satisfactory growth of the middle distillates. The profit position of the middle distillates to the refiner is such that the oil industry must, in its own interest, carry the expense of research and all kinds of reasonable assistance to the various marketing outlets.

The profit angle to the refiner and the reseller is the prime point of my dissertation. In improving the heating oil operation I know of no greater improvement than that which has to do with the profit phase of our business. I make this statement, without fear of contradiction: That, from the supplier's position, as well as the distributor, there is no better profit agent than the middle distillates from the viewpoint of capital dollar invested.

Distillates Profitable

The yields to the refiners and to marketers in the field of middle distillates, particularly No. 2 oil, have been found nationally to be very profitable, so much so that a number of the refiners have embarked upon elaborate campaigns to influence their marketers, distributors, dealers, commission drivers, etc., to engage in this profit potential business.

The future of this business in this country of ours is more or less unlimited. The increase in population, and the forecasts which have been made by people who should know precisely what they are talking about, predict a compounding demand for energy in which the middle distillates should and will share to the extent to which they are entitled. It is true that there are some markets, particularly in the East and some other sections, where there are temporary blockades due to natural gas competition, but nationally there is no need for pessimism, even to the slightest degree.

One of the best expressions of this note of confidence is, as previously stated, the continued investments of millions of dollars by refiners and their repeated statements that the future of the middle distillates is more or less unlimited. Some of this is based upon the tremendous growth of population in this country. Again, millions of new homes will be constructed within the next few years.

More cooperation

In addition to all of this, it is refreshing to note that there is an increasing collaboration between refiners and manufacturers, looking towards the creation of new equipment which will expand our joint markets and which will find favor in the public eye.

At a recent meeting of the API Fuel Oil Committee, which is a section of the Marketing Division, a motion was made and carried that something be done towards the creation of what might be termed a fueloil institute, looking towards an over-all body which would have the function of coordinating the various segments of our business and acting as a guiding body in the creation of policy to steer our industry in the proper direction. It is hard to conjecture at this stage just what it will amount to, but it is an expression of a keen desire to capitalize upon the great opportunity which lies ahead for our business.

In conclusion I wish to reiterate that there is no basic reason for pessimism in the future outlook of our industry. To the contrary, you can expect, in my humble opinion, more and more cooperation from your suppliers, not because of any philanthropic interest, but because it is simply good, sound business.

Tom Carson drawing on his 32 years experience among the marketing segment of the oilheating industry presented a talk at Boston under the title "How to improve the oilheating Industry." In his characteristic thorough fashion he quotes from what he calls Oilheating's Bill of Rights, cites the development of an oilfired year-'round airconditioning unit, praises basic oil industry research aimed at heating oils, plus other factors which indicate the present strong position of oilheating. Tom concludes with the observation that he believes the industry can expect more and more cooperation from the suppliers, "because it is simply good, sound business."

Liquid heating-cooling Primer

Specialists in hot water Systems are ready for the booming airconditioning Market

Do you know what liquid heating-cooling means? This article describes the various systems that can be used in conjunction with boiler heating. If you've felt that hot water plants were eliminated from the airconditioning improvement market—read on to get a part of this growing business.

AS A FUELOIL DEALER engaged in the installation of hot water heating systems, have you considered the possibilities of the vast market for residential summer cooling?

In the past few years, a new term —liquid heating-cooling—came into being. It was the "wet" heat industry's answer to residential year-round comfort.

Do you know what liquid heating-cooling means? How it fits into a hot water heating installer's operation? Have homeowners' questions about these systems left you fumbling for words? Here, for the first time, are complete yet simple explanations of all the systems which come under the heading "liquid heating-cooling."

Much of this information has been compiled by I-B-R and The Better Heating-Cooling Council to give the hot water heating installer the answers to basics and to show why year-round liquid systems are in his bailiwick.

Dealers experienced in hot water heating installations will have little difficulty handling any type of compatible cooling equipment. There should be no problem with servicing of refrigeration equipment, as this is usually guaranteed by the manufacturer and serviced by a factory-trained representative. In many cases, the dealer will be required only to put factory-sealed refrigeration equipment in place and make simple electrical connections.

In liquid heating-cooling installations, we combine the fine qualities of a hot water boiler with a complementary, efficient water chiller. These two units provide the source for heating and heat removal and are adaptable to the piping system.

These two units can be operated together in a combination system, or heating and cooling functions may be independent. Some methods of cooling independently of heating may not use a water chiller, but the cooling system can be installed with little or no ductwork and, since it functions in a home with a hot water heating system, is still regarded in the realm of liquid heating-cooling.

The boiler and water chiller in a combination system are connected in parallel and a valve is provided to switch the water flow from one to the other. This may be either a manual or motorized valve. The motorized valve provides completely automatic operation.

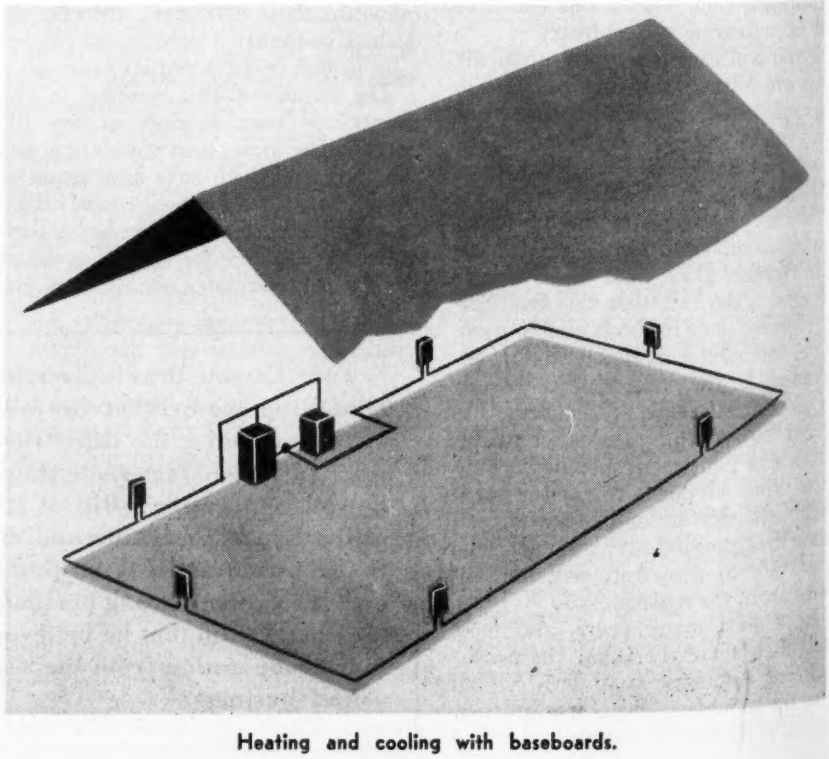
Piping from the boiler and chiller to the distribution system consists simply of a supply and return line. The use of piping layouts by accepted methods, such as recommended by I-B-R, enables the installer to apply simple step-by-step procedures to water piping systems.

Two types of piping systems may be generally applied as a distribution method for conveying the water in a combination system. These are: one-pipe and two-pipe reverse return. These systems will be applicable for homes constructed on concrete slabs, with crawl spaces, with basements and with piping run in attic spaces with down-feed risers.

With dual temperature systems, complete insulation of piping is essential. Insulation must include a vapor barrier cover to prevent air infiltration. Piping insulation, of course, reduces the heating and cooling thermal piping losses. Thus, the application of insulation for a water-fed system is clear-cut for the installer. He need not be confused by questions of climate or latitude.

Convector Heating-Cooling

In a convector heating-cooling system, a boiler and chiller circulate and control hot or chilled water in a closed piping layout which carries the water



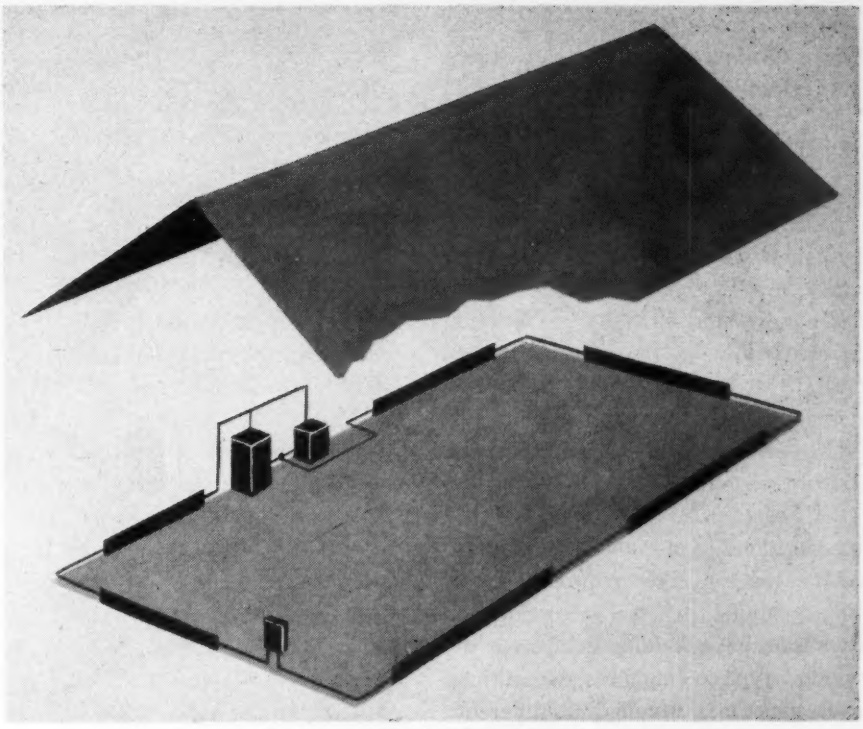
Heating and cooling with baseboards.

to the individual convectors or room units.

Heating-cooling convectors are fabricated by several manufacturers. These units have heating output ranges of 10,000 Btu per hour to 55,000 Btu per hour at 200 degree water temperature. The comparable capacities for cooling are from 4,000 Btu per hour to 36,000 Btu per hour at 42 degree water temperature.

Essential parts of the convector consist of a fan, frequently having adjustable speed; heat exchanger, which might, for example, be composed of copper tubing and aluminum fins; a filter, which removes dust and dirt from the circulating air.

Convectors are available in two general cabinet design types: recessed, for new installation; free-standing, for use in existing structures or in modernization. Also where desirable there are convectors which provide fresh air intake. These convectors are of sufficient size to satisfy the heating and cooling demands of a room. Where required, multiple units may be used.



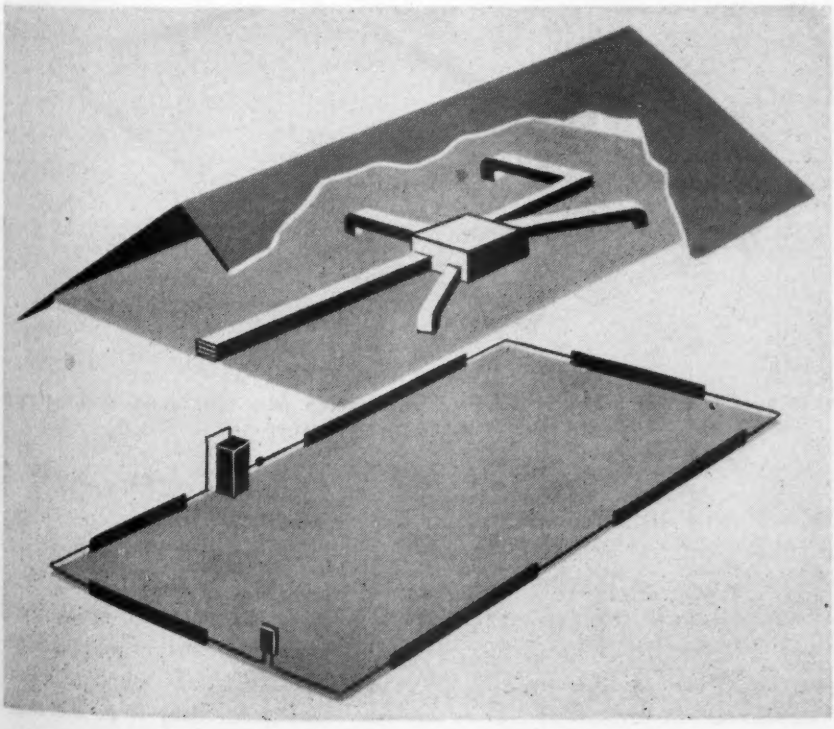
Heating-cooling baseboard system.

Heating-Cooling Baseboards

A heating-cooling baseboard system also uses a hot water boiler and a water chiller to provide year-round comfort. In this system, too, the same piping carries chilled water for cooling and hot water for heating.

Room units are installed in the same location as conventional heating baseboards—at the base of the wall around the perimeter of the room.

Radiation and natural convection occur in the heating cycle. For cooling, unconditioned air is passed over the finned-tube element (which carries chilled water) and forced out at the top of the enclosure. In the process, the air is cooled, dehumidified and filtered.



Cooling with self-contained unit installed in attic.

Separate or "Split" Systems

Separate or "split" systems for cooling independently of hot water heating offer a number of benefits, particularly in older homes with existing hot water or steam heating systems.

Until several years ago, when many of these split cooling systems first appeared on the market, central summer cooling in many older homes was considered impractical and expensive. This held true especially if extensive ductwork had to be installed.

Now it is possible to install a central summer cooling system in any American home, with a system designed to meet the needs of house construction and the homeowner's pocketbook.

Among engineers, there is a strong feeling that cooling independently of a hot water heating system offers a sound and efficient method of providing year-round comfort. Reason for this is that heating is introduced at a low level, near the floor, and produces natural convection; cooling can be introduced at a high level, near the ceiling, and produces natural circulation (warm air rises, cold air falls).

It is apparent, therefore, that split systems have a definite place in either new or old homes.

Self-Contained Room Units

Most generally known method of separating the cooling from heating is by use of *self-contained* room cooling units.

Room cooling units may be located in a window or an opening in the wall. Wall openings may be made under a window or higher on the side wall. For cooling, the higher sidewall location is preferable.

Self-contained units, it should be kept in mind, house all elements necessary for the cooling process in a single cabinet or enclosure. Such a unit can be generally compared to window-type cooling units, except that it is sometimes installed in different locations. As they are generally air-cooled, outside air must be introduced to remove heat absorbed in the cooling process.

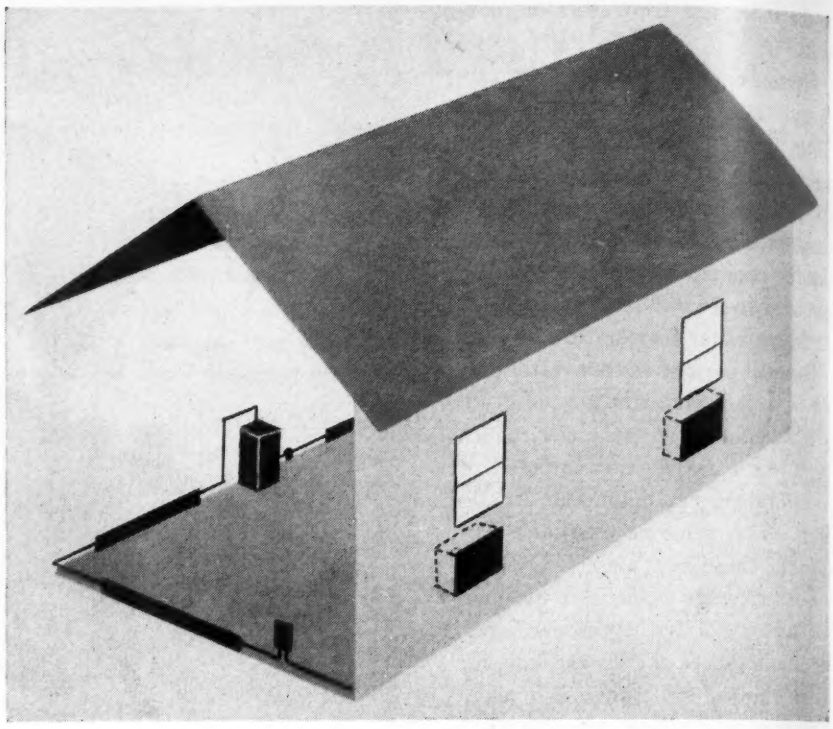
One type of self-contained room unit is designed for installation in a home in which modernization of heat distributors is desired. This consists of a room cabinet which houses a self-contained cooling unit in addition to a heating element. The heating element can be connected to existing piping in the heating system, and the cooling equipment functions independently.

Such a cabinet can be installed in one room at a time, allowing the budget-conscious homeowner to modernize his heat distributors and add cooling to one or two rooms at one time.

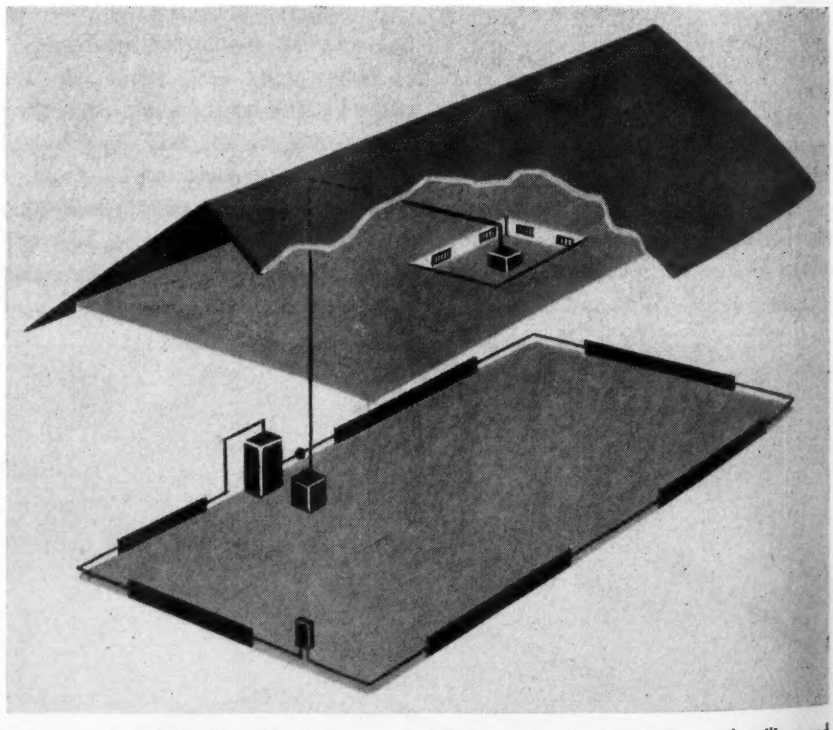
Central Self-Contained Units

Another self-contained unit can be installed as a central cooling system. This unit, naturally, will have to carry a heavier load since it will be cooling more than one room or area.

In a residence or apartment, a self-contained central cooling unit may be concealed in a dropped ceiling space of a center hall or closet. This dropped ceiling forms a plenum or distributing chamber. Since the plenum is in a central location, all surrounding rooms can receive cool air via high wall outlets which connect each room with the plenum.



Separate cooling with self-contained room units.



Separate water chiller located in basement, with fan coil units. Note dropped ceiling used as a distribution chamber for cooled air.

A similar self-contained unit can be installed in an attic space, with short runs of duct leading to ceiling outlets in rooms below. Duct for this type of installation can be of the insulated fibre type, which is light and easy to handle.

Some manufacturers recently have made available self-contained units specifically to complement their hot water heating products. Since these systems have been tested by the producers in a number of installations, installers can obtain sound technical and installation data from the same

(*Please turn to page* 147)

Meenan pays 'Do-it-Yourselfers' to learn to be burner Servicemen

EARLY THIS YEAR the following advertisement appeared in the "Help Wanted" classified section of *Newsday*, daily paper on Long Island, N. Y.:

OIL BURNER TRAINEES

We are looking for young married men 23-30 years of age. Residents of Nassau County who are mechanically inclined. Men who are able to do their own fixing around the house, who know how to use a set of small tools. If you are such a man we will teach you oilburner service work at our expense. We will pay you $1 per hour if you will attend 2 hour session 4 nights a week. Monday thru Thursday, 7:30 PM to 9:30 PM. You will receive thorough instruction and will learn about oilburning from equipment actually set up and operating. The course will run 6 months. April thru October and the class will be limited in number. Write giving complete details about yourself. Do not waste your time or ours unless you are sure you can qualify. The men accepted for this training and who complete the course will be eligible for employment with our organization as oilburner service men. Box 9191, Newsday, Garden City.

"Box 9191" was the Meenan Oil Co., a leading fueloil distributor in the area, whose operation includes the highly-concentrated Levittown section. Goal of the ad was to attract 12 candidates for service training; actually the company received 235 answers.

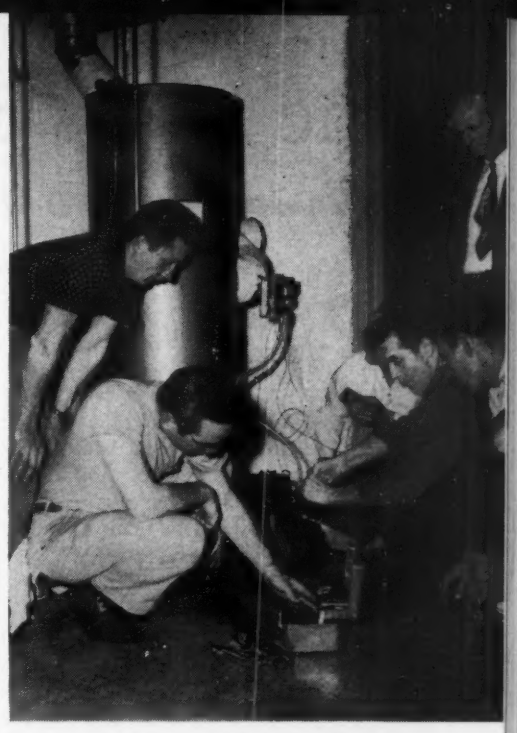
Thomas Hickey, general manager; William Brasch, service manager and Nat Edmands, assistant service manager, screened the letters of application. In all they agreed on 28 men, each of whom was interviewed individually by Brasch and Edmands. They selected 15, three of whom eventually failed to pass a required physical examination, so that a class of 12 trainees resulted—the original goal of the program.

The idea of taking untrained, mechanically-minded persons and training them to be qualified burner servicemen isn't new, of course. But it is interesting to note that for the eight hours that these trainees will spend at school each week for 26 weeks they'll be drawing pay at the rate of $1 an hour.

During the training period the men are employed at their own jobs, devoting the two hours between 7:30 and 9:30 P.M. every Monday, Tuesday, Wednesday and Thursday to their burner instruction.

The schooling takes place in a compact, well-appointed classroom at Meenan's Hicksville, L. I., headquarters. Prominent is a line of three oil-fired boilers—a General Electric unit, a Timken rotary job and a York. These are the three that Meenan servicemen are most likely to encounter in their field work.

Each of the boilers can be and is fired by the students. First classes, which started in April, went over basic fundamentals and principles, with later sessions devoted to dismantling and reassembly of the burners and components. The boilers, connected to water lines, can be operated and observed under the exact conditions that a serviceman might expect to find in a customer's home. Furthermore, the instructors can simulate almost any service complaint—even to the introduction of sludge and water into the fueloil—so that the trainees get lots of practical education along with the principles and theories.



Bill Armstrong, Meenan service supervisor, looks on as some of the oilburner trainees work on a York boiler-burner unit.

A long table in the "L-shaped" schoolroom serves as an oilburner controls training center. Here—again after learning the identity, function and operation of each—the students take apart and put together the various controls, learn wiring and how to trace for electrical faults. In addition to the current models of each, much work is done on the older makes and types of controls to be sure that the trainees will be familiar with just about any control they might be called upon later to service.

Service manager Brasch, his assistant, Nat Edmands, and service supervisors Bill Armstrong and Bud Heinlein alternate as instructors.

The company is quite enthused about the success of the program to date and it was apparent from a brief view of one of the classes that the students share the enthusiasm and represent an interested, eager and intelligent group of trainees.

Bud Heinlein, service supervisor, watches while trainees work on an oilburner control problem.

One Lock, 34 Keys

In Seattle Pearce helps Dealers to load their Trucks at a self-service Rack

by
V. M. Douglas

Key loading or unloading is not uncommon in fueloil operations. Usually, it's the practice to give each fueloil distributor who uses the service a key which opens his own individual pump and ticket printing meter on the loading rack. Here's a bit of a twist in that Loren Pearce supplies 34 dealers with keys to a single lock. The interesting part is that it works and the dealers themselves appreciate that they are "on their honor."

SELF SERVICE at a loading rack is not new. For some time it has been found both economical and convenient for distributors and dealers to work together by having tank truck drivers pick up loads of fueloil with a printing meter as the only salesman and recorder.

Under this arrangement the distributor presents a dealer with a key to a ticket-printing meter and pump which will enable the dealer to take deliveries of fueloil when and as he may wish. The dealer is invoiced for all the oil which passes through the meter for which he has the key. In some districts this procedure is popular, while some claim that it has its undesirable features.

In Seattle there is a distributor who really has faith in his fellow man. Loren Pearce, who is the head of Pearce Burner Oil Co., is the distributor of Signal oil in the Seattle, Wash., district. He has a small modern office out in the Ballard District, with a conventional loading rack from which he fills his delivery trucks. This is primarily a retail operation.

On 102nd Street, near Bothell Way, one of the main arterials leading north, is a fueloil loading station which seems quite normal in appearance, with the possible exception that there is no sign indicating the name of the owner, or what brand of oil is being dispensed.

That inconspicuous roof over a platform back of a fence behind a gasoline service station is perhaps the only loading rack in the world which is operated on an honor system. Pearce has two 10,000 gallon tanks for storage of No. 2 furnace oil, and two 10,000 gallon tanks for No. 1 stove oil. Liquidometer tank gauge serves each pair of tanks, and everyone concerned is informed that the quantity of oil on hand is double the amount shown on each gauge.

The interesting part of the whole set-up is that there is only one lock which permits the operation of motor driven pumps. At present, Pearce has placed 34 keys to that lock in the hands of as many fueloil dealers.

The method of operation is simple. The driver, often the dealer himself, drives his truck to the rack, takes a delivery ticket from one of several pads left by Pearce in a metal container, and inserts it in the ticket-printing meter, unlocks the switch to the pump, meters the quantity of oil desired into his tank, stamps the ticket again, writes his name on the ticket. He drops it through a slot in a locked, waterproof container, pockets his key and drives to serve his next customer, who may be miles nearer to this loading rack than any other source of supply.

Now, the question and answer department. Asked what prompted the idea of the honor-system loading rack, Pearce replied that the number of long hauls, including long empty trips, frequently determined the success or failure of a fueloil sales operation. Trucks delivering oil in the northern part of Seattle and into the adjoining suburbs would be severly handicapped, costwise,

A transport has just made a drop at the unattended loading rack several miles from Pearce's home office.

One of two Liquidometer gauges shown under the platform with the motor-driven pumps. The gauges warn against run-outs.

if it were necessary for them to drive to the Ballard district to get their oil.

What do you do when there is more oil taken from the tanks than is shown on the delivery tickets? The answer was that such a condition had never been a problem. It's true that there have been slips or errors. In a few cases a driver had forgotten to make a delivery ticket for himself. As soon as it came to his mind he would phone in and report that he had taken delivery of furnace oil or stove oil during the morning or afternoon, and that the amount which was not accounted for on delivery tickets should be charged to him.

Honest, but Forgetful

There had been a time or two when the absent-minded customer did not remember that he had not ticketed himself. In that case a telephone call to the customer immediately preceding or the one following the gallonage which was unaccounted for, would disclose the identity of the person at the rack when no ticket was filed. Then a call to the offender brought an immediate and embarrassed apology. Every dealer considers it a privilege to have such a convenient source of supply to the extent that Pearce claims he has never lost a gallon of oil.

What happens when the tanks are emptied? They have never been empty. There is a telephone located on the property. Pearce's customers make it a practice to check the Liquidometers to be sure there is sufficient oil for their requirements. When they find the contents of either set of tanks below a predetermined mark, they telephone to the Pearce office and a transport is dispatched to replenish the low tanks.

Lights? A time clock turns lights on and off. The lights serve not only to provide illumination but they also discourage possible vandalism.

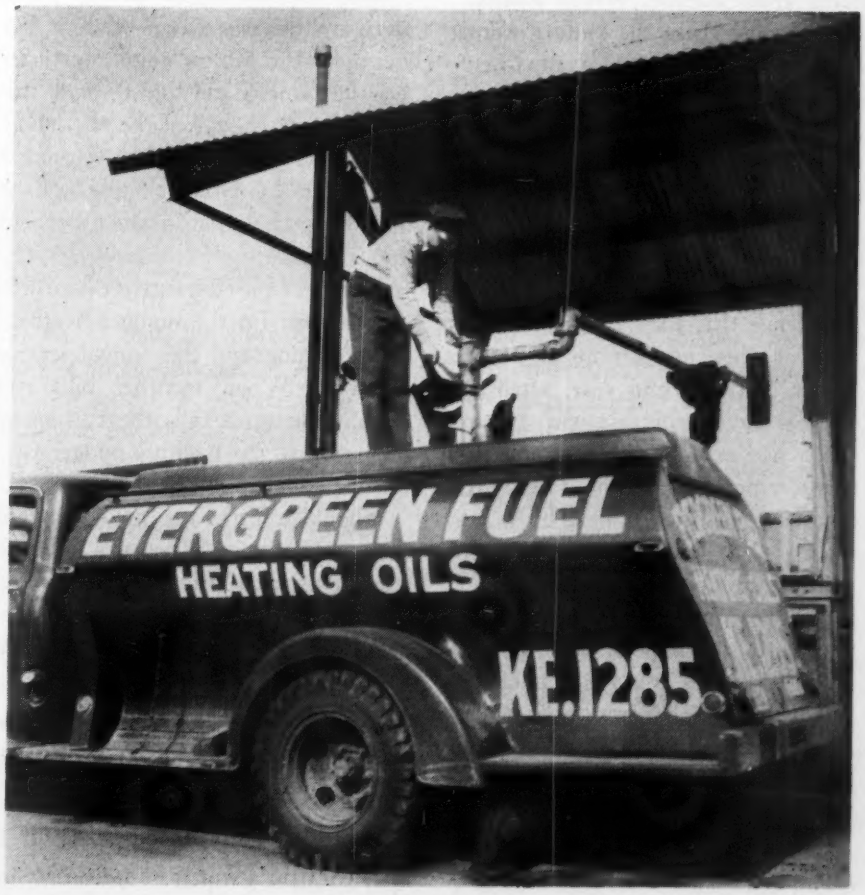
Credit? If payments are not prompt the key will be recalled, for there is no provision for COD.

Perhaps, with oil convenient to customers, delivery costs will be low and there will be a tendency to extend bargain prices. Are these dealers difficult competition? There seems to be little, if any, chiseling. The local OHI has done a good job educating the public on the superiority of oil heat, and it is not necessary for anyone to shave prices to get business in the Seattle area if good service is extended to customers.

That is the story of 34 keys to one lock. It does not require a lot of imagination to realize that there would be a possibility of undesirable conditions arising. Some would not think of starting such an operation. Pearce has had his honor system working for nearly a year, and has never had occasion to lose his faith in the people he trusts.

This sign identifies the home office of Pearce Burner Oil Co. in the Ballard District, northwest of downtown Seattle, Wash.

This is the one lock for which 34 fueloil dealers have a key. The system enables them to fill their trucks from an unattended bulk plant and save many miles in truck travel.



One of Pearce's fueloil dealer customers fills his truck. He is enthusiastic about the "key" plan.

NINTH OF A SERIES—

Quality Builders use oil Heat

Whetton's Oil Co. sets it sights on a steady growth—finds it in new Equipment

by
William J. Stein

WHETTON'S, a fuel supplier since 1882 in Needham, Mass., is a picture of a segment of a community that changed with the times and grew with the neighborhood. Originally a supplier of coal, it started selling oil with the development of oilfired equipment. With sights set at an annual growth of about 300,000 gallons, a sizable fueloil business steadily growing in a conservative New England pattern has been developed.

Whetton's aims at, and usually achieves, about 200 new accounts a year. Out of this, about 75 are obtained where new home installations have been made. Most of this work is done for a limited number of quality builders who are willing to accept and pay for the installation of one of the better grade burners. Where possible, installations where the builder wants a rock bottom price and wants to cut corners with the cheapest equipment are avoided. At best, selling equipment is not a money maker. Therefore, a cut corner in an installation can represent a future loss in service calls.

It has been Frederick A. Whetton's experience that they have picked up some of these installations as oil accounts in the second year, after the original service contract with the installer had expired. After alterations, to insure proper operation, these burners are serviced and supplied by Whetton's.

With the exception of a few builders of cheap homes, who use gas heat in order to save some money on installation costs, this area has not felt the full impact of competition from gas. Among old customers they may possibly lose three or four a year to gas heat. By comparison, each year from 20 to 25 old worn out burners are replaced with a new oilburner.

Although sales and service are not a profitable part of the business, they are necessary and important. The continuance and growth of the business depends upon its success.

Aside from new accounts obtained by new installations, Whetton's uses several other methods to ferret out valid prospects. Real estate people are solicited to provide leads to new purchasers. The Community Welcoming Service provides the names of families that are moving into the community. These families are solicited.

An institution in the Needham Area is the monthly newsletter issued by Whetton's. "Suggestions for Your Probable Interest" dates back for 20 years. It is used to carry community messages from organizations such as the Boy Scouts, Little League and other community projects. Often the activities of some local well known interesting personalities are described.

This medium is also used to introduce and describe a new product. For example, the sale of liquid fertilizer was introduced and sold through this publication. The use of the "UNIFILL" cap was brought to the customer through the monthly pamphlet. Each month a paragraph or two is devoted to "Preventative Maintenance." The attention of the customer is thus called to the need for the summer overhaul and cleaning and the annual service contract. When monthly bills run high, Whetton's calls the customers' attention to the monthly budget payment plan they have to offer.

Should a price rise on equipment be in the offing, Whetton's will call their customers' attention to this and suggest immediate action if a customer is contemplating bringing his heating system up to date.

Frederick Whetton, general manager, indicated that their customers, who receive this bulletin with their monthly bills, express pleasure at reading it. Other firms in the fueloil and other business have sought his help in organizing a similar pamphlet.

In addition to the newsletter, Whetton's advertises in the local newspapers. Two-thirds of their advertising is of an institutional nature, one-third reflects their preference for installing General Electric or Waltham equipment.

To provide adequate service for customers, Whetton's maintains six service trucks and six men who work around the clock to take care of any emergency that may occur among their 3,000 service accounts. Nine clean looking fuel trucks care for their deliveries. Whetton stated that they try to restrict their business to a seven mile radius.

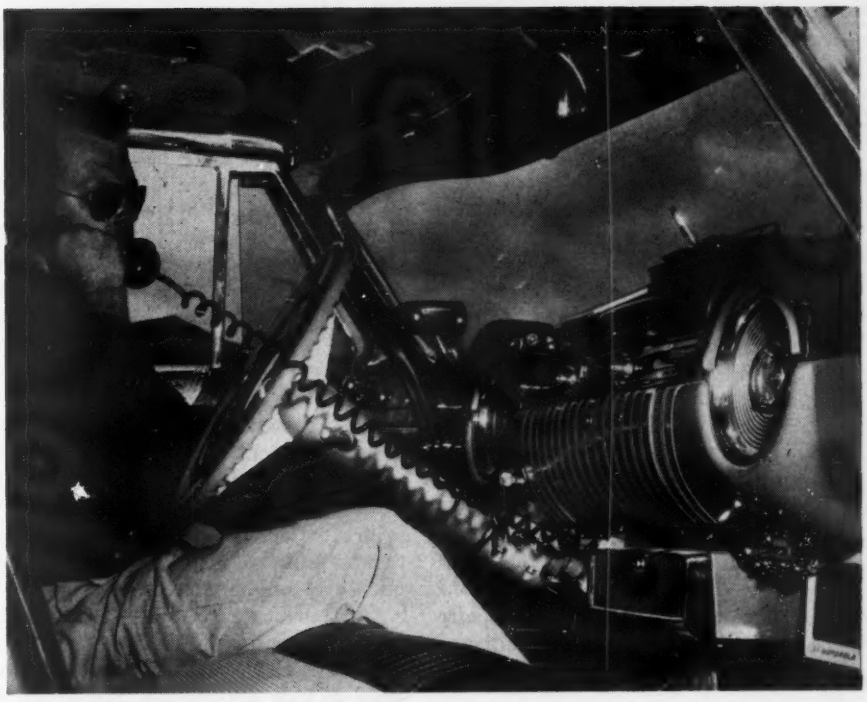
To accommodate customers, Whetton's maintains a business office in the downtown section of Needham. This has the effect of bringing many of their customers personally into Whetton's where they pay their monthly budget bills during their regular downtown shopping tour. It is interesting to see these people come into the office and establish a personal relationship with Whetton and his associates. It lends a personal touch to a business that, undoubtedly, has the effect of making Whetton's a habit.

Drive into Needham and ask for Whetton's Oil Company and the reply is that "Whetton's is just down the street." The impression is that Whetton's is not just another business in town, but rather, it is one of the local institutions.

This Needham, Mass., dealer avoids the builder who wants a rock bottom price and who is willing to cut corners to get it. This kind of economy results in higher service expenses—and since Whetton's wants satisfied customers they start with the installation.

Two-way Radio boosts Sales

by
George Wolf, Jr.*



In touch, in a hurry with any of his business operations is George Wolf, Jr., above, via the two-way Motorola radio installed in his car. The communications system, which makes possible immediate contact with drivers on the road, results in better customer service, improved employee morale.

FOR TWO YEARS we have enjoyed the advantages of two-way radio in the distribution of petroleum products such as fueloil, gasoline, kerosene, motor oil and related items—a business we moved into almost simultaneously with our introduction to two-way radio.

What has two-way radio meant to our business? For one thing, it has helped substantially in the boosting of an annual gross of around $900,000 to upwards of $1,000,000. We tell our customers that we can give them faster and better service, and then we prove it, which means continued sales or repeat business, and excellent word-of-mouth advertising.

Here's how it works: we have tank trucks of 1,000, 1,200, 1,500, 4,000 and 4,500 gallons capacity. All have Motorola two-way radio installations. Every morning the trucks leave Sligo for Oil City to pick up a load of fueloil, gasoline, etc., and either take the load on a regular route or return to Sligo for directions.

Some of our customers are heavy equipment users. We often get calls asking for immediate delivery to such customers. Say that it's about 9:15 A.M., and the tank trucks are on their way from Oil City to Sligo. We can pick up the two-way radio microphone and in seconds be talking to the truck driver closest to the delivery. He follows directions, delivers, and another customer is happy because of accelerated service.

We not only give the quickest possible service in this manner, but we've saved overhead. Mileage costs for one of our big tank units runs from 15 to 20 cents per mile, and a driver's time on top of that. By diverting a truck only a short distance off its regular run to service a customer, we save the time involved between its return to Sligo, and its run out into the field again for a delivery.

Next year some time we expect to have more two-way radio units in more of the fleet vehicles we operate.

Maintenance of our equipment throughout operations is considerably lightened and expenses are reduced. If there is trouble with equipment at one of our Pennzoil chain of stations, it used to mean a day or so shutdown. Now, in minutes, we can get out and help him. The same quick interchange of information helps a truck driver with a breakdown of his truck.

We should mention an advantage of two-way radio that might not be apparent at first glance. We find our employees have a stronger sense of security in their work now, because they know a call from the family, for instance, can be relayed immediately to them when they are working.

We also value highly the life-saving potentiality of radio communications. For instance, one of our drivers was using one of our smaller trucks for strip mine and farm deliveries when he became terribly ill. He used the two-way radio to call for help. We got to him where he lay under a tree, trying to rest. In all probability, our fast action in getting him to a hospital, where blood transfusions could be given, saved his life.

These are only a few of the more important benefits we are deriving from the use of mobile radio communications. Yet, taken collectively, they represent economies of one kind or another that more than pay for our original investment, in better service, improved public relations, greater employee morale, and higher business profit.

*Pennzoil Distributor, Sligo, Pennsylvania.

Maine Oil & Heating Group in Management-Type Convention

Re-elected officers of the Maine Oil & Heating Equipment Dealers Association: Left to right (seated): Edward P. Hacker, president; Jacob S. Holmes, Belfast, vice-president; (standing): Gard W. Twaddle, Jr., Auburn, treasurer; H. Allen Mapes, Springvale, secretary. Not shown is Donald H. McGovern, executive secretary.

FOUR INDUSTRY experts headed discussions on as many practical working problems of the fueloil and oil-heating industry at the third annual convention of the Maine Oil & Heating Equipment Dealers Assn. at the Martha Washington Inn, Winthrop, Maine, on June 20.

At the morning business session Edward P. Hacker, Ballard Oil & Equipment Co., Portland, was re-elected president for the third time. The other officers and directors were likewise re-elected for another year. The executive secretary of the group is Donald H. McGovern; the convention chairman was H. Allen Mapes of Springvale, Maine.

Hubner explains Oil Additives

The first discussion leader at the management session was William H. Hubner, specialist in petroleum additives for the Ethyl Corp., New York. He first emphasized the fact that both the oil companies and the additive manufacturers are working as best they can to improve fueloils, based on the particular crudes available. He insisted that you can't put one additive into all fueloils at the dealer level. Some will help one oil greatly and do harm to another, he pointed out.

Speaking of additives for rust prevention in tanks he showed that the problem is not like it would be in a motor car where the motion keeps the product agitated; in an oil tank it just lays there and if there's water it eventually corrodes. The best non-corrosion additive over any length of time is sodium nitrate, he feels. When asked about filters on trucks, he said that these are useful if the oil in storage tanks is being turned over fast with no chance to settle.

On the question of whether any additive will help the pour point where customer tanks are outdoors, it seems it can be done but is quite expensive. One help here is to keep the oil absolutely dry, and also in sub-zero weather some kerosene might be added.

Whetton shows Budget Advantages

Fred A. Whetton, Whetton Oil Co., Needham, Mass., as the second discussion leader related his experiences and his reasons for promoting monthly payment budget plans. With 3,000 No. 2 oil accounts he has 600 on budgets.

In speaking of collections being tighter today he says it's because the country is in a boom period. "A boom period is where a customer feels prosperous enough to live beyond his means," in his opinion. Fueloil collections were better in tight money periods.

Whetton listed four reasons why budget payments are desirable. The first is convenience, both to the customer in avoiding large bills and to the company in greater delivery flexibility. He noted the gas utilities, at their sales meetings, put great emphasis in equalized monthly bills and as a result get about 70% of customers to adopt them. The reason of course is to never let the customer see a $75 or $90 winter month bill or he'll talk about it too much.

The second advantage is keeping the customer on the books for every month in the year. Summer months are vulnerable to competition. There are a lot of "gimmick" deals being offered but the budget customer is not impressed.

The third advantage is help on your capital requirements. His 600 accounts on this basis average $23 monthly payments. That's $13,800 a month paid in starting June 15. At the high point of October 15 the customer reserve fund is over $45,000. On December 15 it's $30,000; then $16,000 on February 15 and gets down to $4,000 on March 15.

The fourth advantage in monthly payment systems is their help on spring collections. Around May first you find quite a few good people are delinquent by two or three months. Now you can feel free to ask for it, because if they say they're hard up you throw in the budget plan with the old bill added.

On slow open accounts, Whetton explained, we generally go to see them on the 15th of the second overdue month. Budgets can help here. Unfortunately, though, it's usually the careful people who take budgets; they don't help deadbeats.

Stevens on delivery Costs

Fueloil delivery costs were explored by the third speaker, John H. Stevens, Booma-Breed, Inc., Swampscott, Mass. His company delivers 7 million gallons a year with nine trucks working in a 15 mile radius. He first pointed out that profits are not determined to a great extent by the cost or sale price of the oil because the individual dealer can't do much about those. Profits come through operations. He noted that budget plans incidentally also help delivery costs because they prevent customers refusing delivery near the end of a month asking the driver to return on the first.

Salesmen, he feels, can help delivery costs by avoiding sales where the stop would be hazardous for a truck or where the fill is so remote as to require extra hose lengths. The installation men can help by locating the tank and the fill box as near the street as possible. All jobs should have audible fill signals; they average 20 gallons more a drop.

Truck pumping speeds are vital—for four years his rate has been 75-80 gallons a minute. In buying a new truck, take the driver along; he knows what will speed up the output. All of our fills are Unified; we figure it saves 22 seconds a stop.

"Summer is the time to review your 'K' factors, get set for the season. We do not try to get maximum drops; there's a danger in cutting your reserves too close—you get too many emergency drops. Rather we prefer 185-190 size. In January we run between 675 and 800 gallons delivered per hour, 120 gallons per mile."

Asked his opinion on proper size for trucks, Stevens said that each dealer should match them to his operation. His company uses 2,300 gallon size. Drivers are paid $1.95 an hour with no incentive plan at present. No emergency deliveries are made in weekends except that service trucks have kerosene tanks and can tide them over. These are radio-equipped.

Out of 4,400 accounts only 110 are call-ins; then there are no COD's ex-

cept where a regular customer gets behind with his account.

Scott stops service Losses

As the final discussion leader, A. Butler Scott, Scott-Williams, Inc., Quincy, Mass., had the topic, "Does a service Department Pay?" A lot of companies, he feels, lose $3 to $4 an account. The greatest loss, obviously, is in not fully using a man's time. You can make a big stride through using a Tachtograph on the trucks, two-way radio and a morale-building incentive.

Assume paying $2 an hour for the year's 2,288 hours. After vacation, holiday and sick time you're down to 2,120 hours. Then the time for checking in and out, getting stock, stopping at the local pub, breakdowns, 1½ hour lunch periods, and you get down to 1,820 productive hours. You've lost $936—this plus car expense and the serviceman really costs $3 an hour.

If calls average 1½ hours he now costs us $4.50 per call. For this we charged $5, but our service department overhead was $1.85 per call. The men pace themselves at 4 to 10 calls a day.

Service contracts are the lifeblood of the department. If you had all on contracts you could completely budget the time. As a minimum get contracts up to where the income equals the total payroll of the department. In addition to contracts, Scott continued, we also sell an overhaul at $12.50 and include in this one call during the heating season. "We save a fair amount on unused calls."

One big source of lost time is in the analysis of the trouble on the job. Training is everything; teach the men to think. Also, Scott said, it's good to have cash prizes for men with fewest repeats.

"Ten years ago our company determined to stop service losses; sales department pressure almost defeated us. Our project was to take the men off the payroll yet exercise control over the department. We made them independent contractors.

"We established rates for every type of work, with hourly rates for the unusual. We recognize a normal amount of repeat calls, also feel the responsibility to provide fair income in slow periods. The answer, of course, is to have a minimum of men that can do the job right; we average one man to each 1,000 accounts and they all do a good job.

"We went all out for contracts and overhauls for summer work. We increased inventories in stock and on the trucks. Each man settles his own transportation . . . he can buy the truck and we give him three years to pay with no interest; otherwise he uses his own car.

"The men get most of what we take in because rates are liberal; they earn much more than they did by the hour, not by working harder, but by working smarter.

Every serviceman can't work this way, Scott conceded. The best are 20-30 years old, hungry for income with a house to pay for, a couple of kids. You can't use a man who doesn't need the income. If he wants to stick to seven or eight hours a day, he's no good on this job.

"Our scale goes something like this: on contract calls any time day or night pay the man $3.15; if the account is still in warranty pay him $2.95 daytime or $3.50 nights. Overhaul for contract customers $4.50; on the $12.50 overhaul deal we pay him $4.85, then on the free call that goes with this plan we pay him $2.70 daytime or $3.05 at night.

"Budget plan customers like to have their service contract included, so we just automatically add it without asking. Finally, our department operates without loss and the customers are well cared for."

The convention closed with a dinner meeting at which Robert Gray, editor of FUELOIL & OIL HEAT was the speaker. He principally talked of industry conditions in Maine as contrasted to other areas, a decidedly favorable comparison.

Speakers and panelists at the third annual meeting of the Maine Oil & Heating Equipment Dealers Association, (left to right): W. A. Sullivan, Shell Oil; E. Wallace Cole, Texas Co.; William H. Hubner, Ethyl Corp.; A. Butler Scott, Scott-Williams; Edward P. Hacker, president MOHEDA; Robert Gray, FUELOIL & OIL HEAT; R. P. Gilmartin, Gulf Oil; John H. Stevens, Booma-Breed; Fred A. Whetton, Whetton Oil. Sullivan, Cole and Gilmartin assisted Hubner in his presentation on additives.

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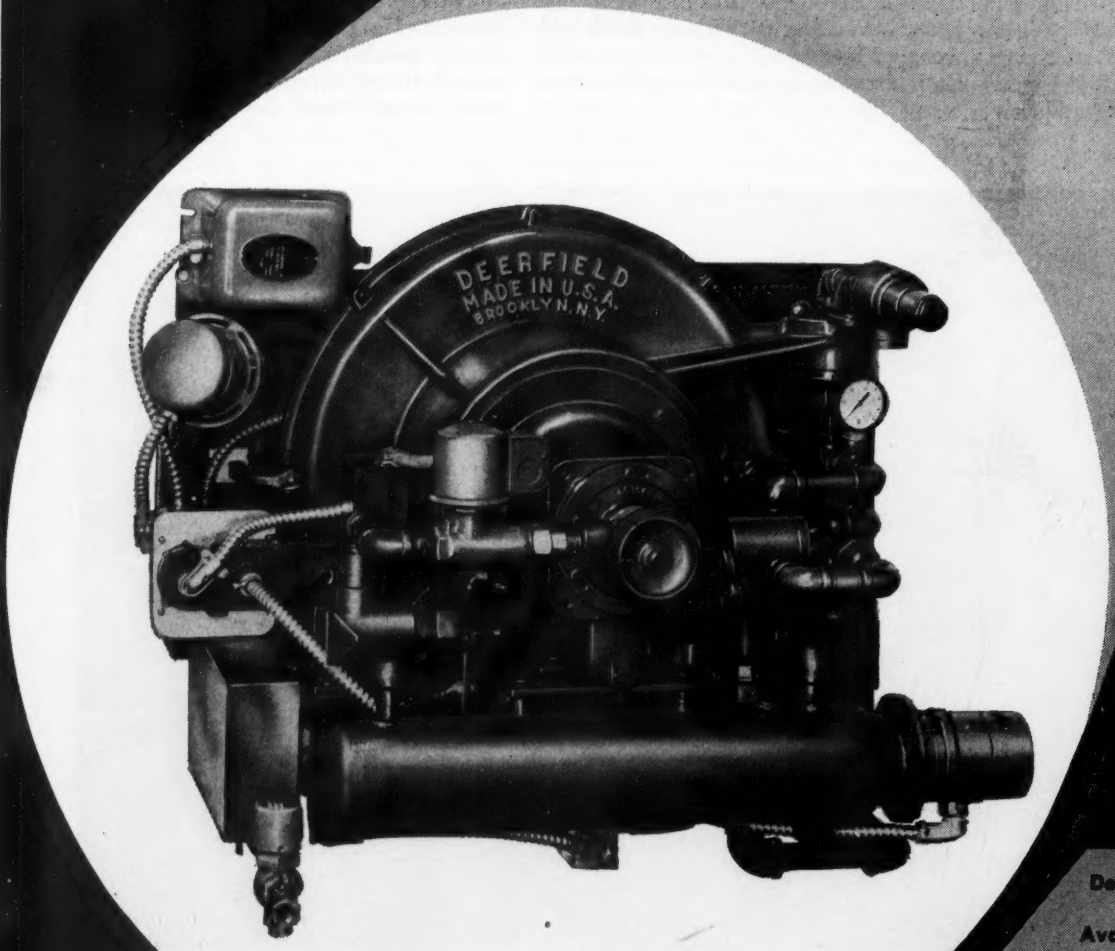

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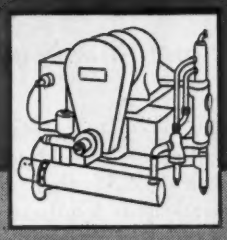

COMMERCIAL & INDUSTRIAL oilburning

SECTION

fueloil & oil heat

NEW YORK

COMMERCIAL & INDUSTRIAL oilburning

Maximum heat Set-back Night saves Oil

Reduced building Temperatures Nights and Weekends cut fueloil Costs greatly

by Henry T. Kucera*

BUILDINGS ARE HEATED, when occupied, to provide environments of health and comfort. Buildings occupied only part of the time need comfort temperatures only during the occupied hours. During all other hours lower temperatures are not only satisfactory—they are extremely valuable because they reduce fueloil bills greatly.

How much building temperatures should drop during unoccupied hours depends on several factors. The temperature in a building always should be maintained at least several degrees above the level at which the building itself, or its contents, will be damaged. Important, temperatures should not drop so low that comfort cannot be re-established within a reasonable period of time.

By a simple law of physics, the greater the difference between the temperatures inside and outside a building, the higher is the building heat-loss. Reducing the temperature of a building lowers its heat loss. Drop the indoor temperature until it approaches the outdoor temperature, and the building's heat-loss becomes almost zero.

Building heat Loss

Stop the flow of heat to a building, and heat units stored in the warm walls, floors, furniture, and other contents start to flow to the air in the building. The air carries these heat units to the outer building surfaces, through which they pass out of the building. The greater the difference between the indoor and outdoor temperatures, the faster heat units are lost from the building.

The greater the heat-storage capacity of the building and its contents, the more heat units are available and, therefore, the slower does the building temperature drop. Both the heat-storage capacity of the building, which is called the residual or mass heat capacity, and the indoor-outdoor temperature difference obviously are factors which affect the rate of temperature drop in the building.

To re-establish comfort temperatures in any building after its temperature dropped on a night or weekend, heat units must be supplied to the building at a sufficient rate to: (a) replace those withdrawn from the building walls, floors, furniture, and other contents during the heat-off or low-heat period; and (b) replace the heat units passing out of the building during the heat pick-up period.

In mild weather, only about one-fourth of the capacity of the heating plant (the burner, boiler, and radiation) is needed to make up for the heat being lost from the building; therefore three-fourths of the capacity of the heating plant is available for replacing the heat units withdrawn from the building itself and its contents. Thus

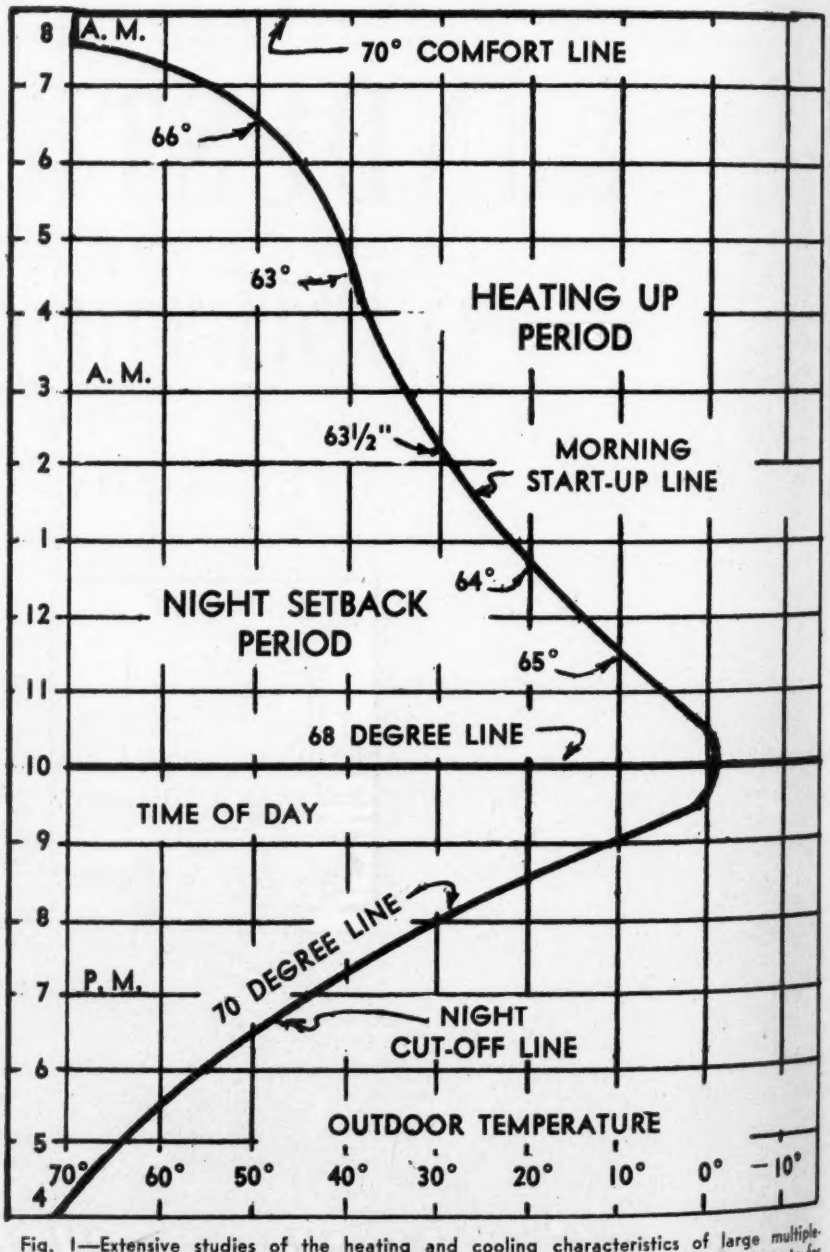

Fig. 1—Extensive studies of the heating and cooling characteristics of large multiple-occupancy buildings provided this curve, which as this article explains is fairly accurate for brick apartment house. But to do the best job of determining when the heat should be started mornings and turned off nights in any particular building, and of course in different kinds of outside weather, you should make studies of the particular building and prepare start-up and shut-down timing data geared precisely to the characteristics of the building.

*President, Automatic Devices Co., Inc.

in mild weather a short heat-up period re-establishes comfort temperatures.

In extremely cold weather, on the other hand, three-fourths of the capacity of the heating system is needed to make up for the heat units being lost from the building; only one-fourth of the capacity remains to replace the heat units withdrawn from the building and its contents. A much longer heat-up period therefore is required in extremely cold weather. The need for the longer heat-up period is great. It is increased by the fact that usually on coldest days building temperatures are at their lowest at the start of the heat-up period.

The need for starting the heat-up period earlier as the outside temperature drops has discouraged many building operators from reducing building temperatures nights—or at least has made them so cautious that they permit building temperatures to drop only slightly nights.

In the past during mildly cold weather, some of these building operators tried dropping their building temperatures considerably at night, as much as they should be dropped to save maximum fueloil. Extremely cold weather moved in suddenly and without warning at night, as it has a habit of doing. The next morning, the buildings were chilled to such a degree that heating comfort could not be re-established in them until hours after it should have been.

To forecast accurately the outside temperature is impossible—hours, let let alone days, in advance. It is impractical to keep a man on duty all night, just to turn on the morning heat at the hour which matches the outside temperature.

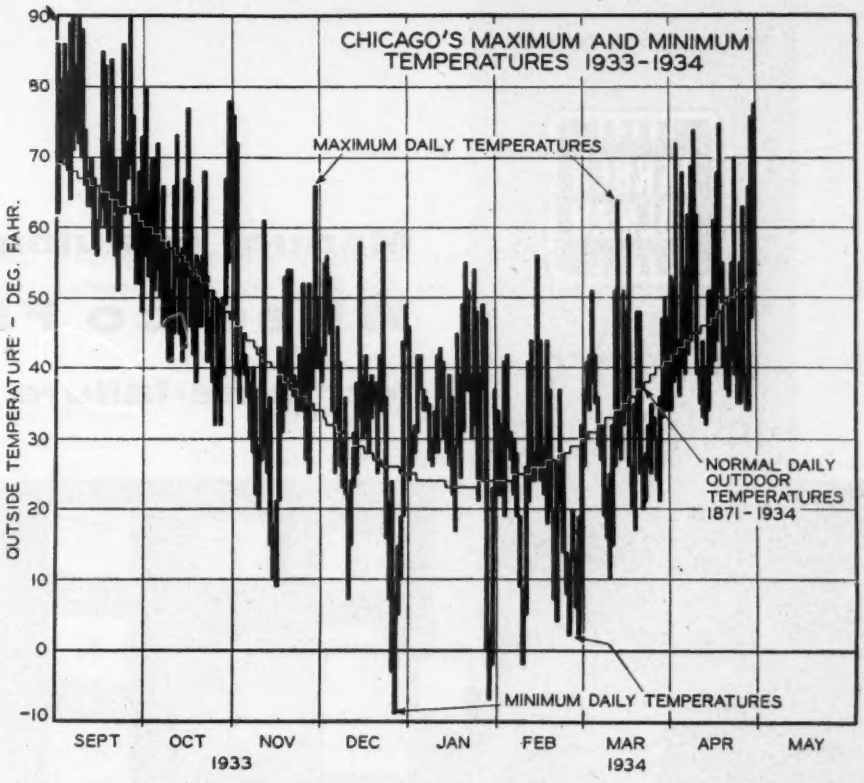

Fig. 2—This chart shows that extremely cold days, days as cold as 10°F., can be expected in Chicago during five months of the heating season, November to March inclusive. However, days warmer than 50°F. often arrive during these same five months. Swings in outside temperatures of almost 70°F. show up in this chart in less than one week's time. That's why an automatic control set-up, not a man, should start up the heat earlier as otuside temperatures drop, and should turn off the heat later as outside temperatures drop.

Common Practices

Thinking they had no other alternative, many building operators followed the common practice of using these two steps:

1. They dropped building temperatures only slightly at night.
2. They set their time-clocks for an extremely early heat start-up time in the morning, a start-up time they thought early enough to compensate for coldest weather.

This two-step common practice, used in many buildings throughout the heating season, does make certain that on most mornings these buildings are warm and comfortable when first occupied. But this practice loses more than half of the financial value (in terms of fuel savings) of night-time temperature setback!

Following this fuel-wasting common practice makes two-thirds of the heating system capacity available for picking up the heat in the morning. Actually only one-third of the heating system capacity is needed for the morning pick-up of heat—during average winter weather, or for most days of the heating season.

The common practice which includes the two steps spelled out earlier leads to trouble in the many buildings having skimpy heating plants—because on coldest mornings these buildings are chilly when first occupied, and perhaps all morning, unless their heating plants pitch in and go to work during the night when outdoor temperatures drop to their lowest. On coldest nights the heating plants of these buildings must work full-tilt at the same pace they work on coldest days.

That brings up an important point. After a heat set-back period, particularly in cold weather, a heating system may quickly raise the temperature of the air in the building to the desired level, yet the occupants may not be comfortable. That's because the building walls, floors, furniture, etc., will be cold—have a chill in them—until they have had time to re-absorb heat units from the newly warmed air in the rooms. The building and its contents lost these heat units during the period of night low-heat. Cold surfaces of walls, floors, furniture, etc., can draw radiant heat from the occupants at a rate high enough to cause discomfort.

Some years ago a joint committee of the National District Heating Association and the National Association of Building Owners and Managers made studies of the rates of cooling down and the rates of heating up of a number of typical structures. These studies indicated the heat-up time required to re-establish comfort, and the earliest time heat-flow to the structure may be stopped in the evening without causing the building temperatures to drop by 10 PM to the lower limit of the comfort zone, namely 68°F. The studies were made with the outside temperature at different levels, of course.

These studies produced the curve shown here as Fig. 1. The curve shows that at 40°F. outside, average winter weather in Chicago, the temperature in an average building will drop from 70°F. to 68°F. in about two and one-half hours, and will drop 5°F. more in the next six and one-half hours.

With the outside temperature 20°F., however, the curve shows the building temperature drops twice as fast as it does in 40°F. weather; also more than twice as much heat pick-up time is needed to re-establish the 70°F. comfort level again in the morning.

This curve proves that little, if anything, is gained by lowering the temperature of a building on an extremely cold night. On such a night, comfort

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Wheelco Flame-otrols

for flame-failure protection

Features of the Wheelco super-duty automatic Flame-otrols are visible at a glance in this special display installation. Note ready accessibility of principal components.

Automatic Operation

Sequence timing for oil- or gas-fired burner or boiler application includes: purging, warm-up proving, pilot proving, low-fire stabilization, ignition timing, and post purging. Terminal connections for directly handling a flame-failure alarm and a proportioning-type control motor are also included. Model 1474 uses flame-rods and emissive-type photo cells as sensing elements, while Model 1574 uses lead-sulphide cells as sensing units.

Manual Starting

Once the oil- or gas-fired furnace, oven, etc. is started, the Flame-otrol shown here takes over the problem of flame supervision. After fuel ignition, the manual model provides for complete burner shutdown protection immediately following flame outage or high-limit "off" switching. Flexible circuit design makes possible use of various auxiliary equipment such as push-button starting, external timers for purging or timed ignition trial. Both "CR" systems using flame-rods and "IR" systems using lead-sulphide sensing cells are available.

Addition of super-duty automatic models for package boiler installations rounds out complete line of combustion safeguards for gas, oil, or combination burners.

Whatever the combustion safeguard requirements on furnaces, boilers, kilns, dryers, and similar applications — there's a Wheelco Flame-otrol to provide superior performance and unmatched dependability. The same sure operation and simplified maintenance that has characterized the manually or semi-automatically started models is designed into the new super-duty Flame-otrols for package boiler operations.

TWO BASIC SYSTEMS

Basically, there are two control systems available for Flame-otrol operations: Conductivity-Rectification "CR" system and Infra-Red "IR" system. A lead-sulphide cell is used as a sensing element in the "IR" system; flame-rods and emissive-type photo cells are sensing elements in the "CR" system.

Both flame "pick-up" methods are available in automatic or manually started models. Compact, plug-in design is incorporated in all models, offers maximum accessibility for adjustment, examination, and repair. The chassis are held in position for normal operation by captive latches or a retaining screw with the exclusive Wheelco terminal strip guaranteeing uniform contact pressure while permitting easy removal.

SIMPLIFIED MAINTENANCE

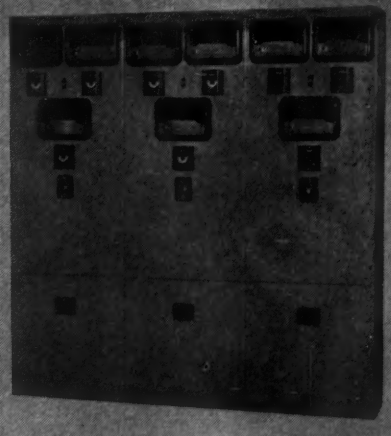
Convenient checking strips simplify trouble-shooting and normal maintenance — require only the use of standard instruments for checking circuits and voltages. Because standard electronic tubes are used throughout, inventory requirements of spare parts are reduced appreciably. Replacements can be obtained readily at any electronic supply house.

Heavy-duty construction of Wheelco Flame-otrol cabinets is an important factor in long, trouble-free operation of the units in all types of plant locations. The rugged, industrial-type steel cabinet with gasketed, dust-tight swing-out cover keeps out foreign matter that might interfere with operating efficiency. Applications requiring a flush-mounted unit are furnished with a cabinet that includes the necessary mounting flange.

Write for literature describing operations of either manual or automatic Flame-otrols today or, better still, have a Wheelco field engineer analyze your combustion safeguard needs. There's no obligation and you can be sure this analysis will be thorough with the recommendations specifically directed to the solution of your problems.

Control Centers

Where a method of housing a complete combustion safeguard system, including Flame-otrols, pilot lights, alarms, etc., is required or desirable, prewired Wheelco control centers reduce installation costs and time, plus providing an attractive centralized package. Flexibility to meet changing requirements is provided by use of removable sections. Bolt-down or hinged covers permit convenient servicing or system checking.



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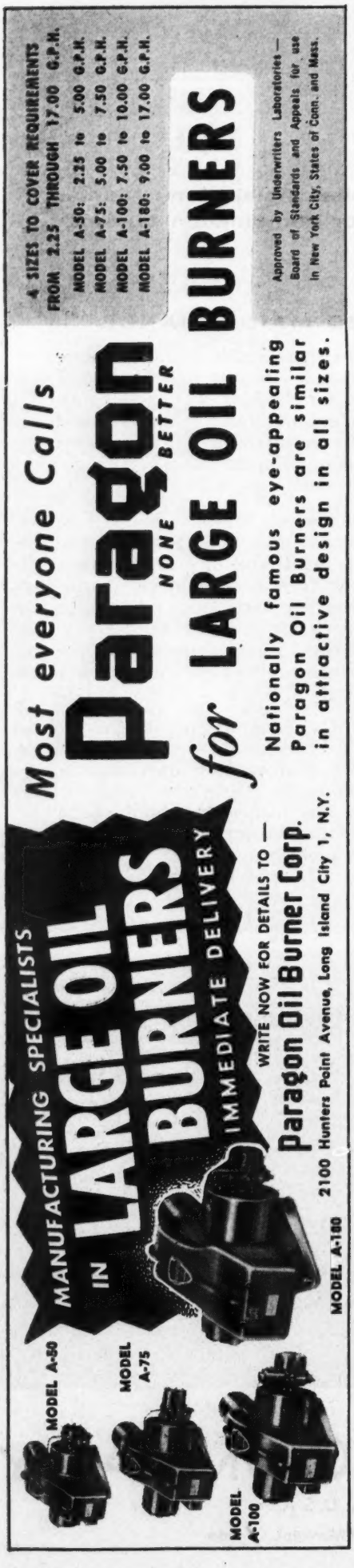
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temperatures should be maintained throughout the night because (1) the inside temperature drops exceedingly rapidly following shutting off the heating plant for the night, and (2) many hours are needed to make a building comfortable again in the morning, after its temperature dropped at night.

The curve also shows the importance of starting the heat flow earlier and earlier, as the outside temperature becomes lower and lower. This saves as much fueloil as possible in every kind of winter weather, especially in mildly cold and moderately cold weather when an early start-up of the heating plant is not needed . . . but at the same time it insures comfort for the occupants when they enter the building on coldest mornings.

The particular curve in Fig. 1 shows the average results of the buildings studied. It is fairly accurate for any brick multiple-occupancy building, hence serves in general to indicate the time of night when the heating system should be turned off (without having the building temperature fall below 68°F. by 10 PM) . . . also the time heat should be started in the morning, to make certain comfort temperatures are re-established at the desired hour. It indicates these things, of course in terms of outside temperatures.

A curve similar to Fig. 1 that shows

COMMERCIAL & INDUSTRIAL oilburning

the heating-up and cooling-off characteristics of any particular building can be made easily, of course, using thermometer readings taken in the building under different conditions of outside temperature.

The "Morning Start-Up Line" is different than Fig. 1 shows if the particular heating system has greater or lesser reserve capacity than a typical heating system. That is, a heating system skimpy compared to the Btu heat loss of the building needs more hours to establish comfort temperatures in the building by a certain time, than are needed by a heating system properly sized, or oversize.

In addition to matching the heating-up and cooling-off characteristics of the particular building, a curve can jibe with the morning time the building should be warm enough for occupants' comfort, and can jibe with the afternoon or night time the building temperature should drop to, say, 68°F. Four or five in the afternoon, for example, may be the proper time to have

TABLE OF SAVINGS BY CONTROLLED HEATING

City	Average Winter Temperature	Percent of additional fuel required (above 70° base) to maintain 71°	75°	80°	Percent of saving by lowering night temperatures 10° for: 8 hrs.	12 hrs.
ATLANTA	50.1	5.03	25.15	50.3	16.16	24.24
BALTIMORE	45.5	4.09	20.45	40.9	13.12	19.68
BOSTON	42.7	3.67	18.35	36.7	11.84	17.76
BUFFALO	40.1	3.35	16.75	33.5	10.80	16.20
CHICAGO	40.0	3.33	16.65	33.3	10.72	16.08
CLEVELAND	41.9	3.56	17.80	35.6	11.44	17.16
DENVER	43.1	3.72	18.60	37.2	12.00	18.00
DES MOINES	40.2	3.36	16.80	33.6	10.82	16.44
DETROIT	40.9	3.44	17.20	34.4	11.12	16.68
MILWAUKEE	38.8	3.21	16.05	32.1	10.40	15.60
MINNEAPOLIS	36.2	2.96	14.80	29.6	9.60	14.40
NEW YORK CITY	43.8	3.82	19.10	38.2	12.32	18.48
PHILADELPHIA	44.8	3.97	19.85	39.7	12.88	19.32
PITTSBURGH	42.4	3.63	18.15	36.3	11.68	17.52
ST. LOUIS	45.3	4.05	20.25	40.5	12.96	19.44
SALT LAKE CITY	42.5	3.64	18.20	36.4	11.76	17.64
SAN FRANCISCO	55.3	6.81	34.05	68.1	21.92	33.28
SEATTLE	50.9	5.24	26.20	52.4	16.80	25.20

Fig. 3—This table was prepared from Weather Bureau figures, by the Fuel Conservation for War, Automatic Controls Industry. It shows how much fuel is saved by dropping building night temperatures only 10°F.—for only eight or twelve hours each day. Especially in office, factory, and business buildings occupied only 40 or 48 hours a week, much more fuel can be saved than this chart indicates. Because low building temperatures can be maintained many more hours per week than 84 (which is 12 hours per day times seven days per week), and the temperature drop for the unoccupied hours can be greater than the 10°F. shown

DIFFERENCE BETWEEN INDOOR AND OUTDOOR TEMPERATURE	70	60	50	40	30	20	10
RATE OF COOLING IN DEGREES PER. HOUR	5	2	1.4	1.0	.75	.33	.14
RATE OF HEAT UP IN DEGREES PER. HOUR	.28	.55	.83	1.25	2	3.3	5.4

Fig. 4—The above figures, gathered during the study of the large buildings described in the caption under Fig. 1, are the kind of figures you should obtain to match the characteristics of any particular building which interests you greatly. You must use figures like these to figure out the best time to start heating and stop heating any particular building during different kinds of outside weather.

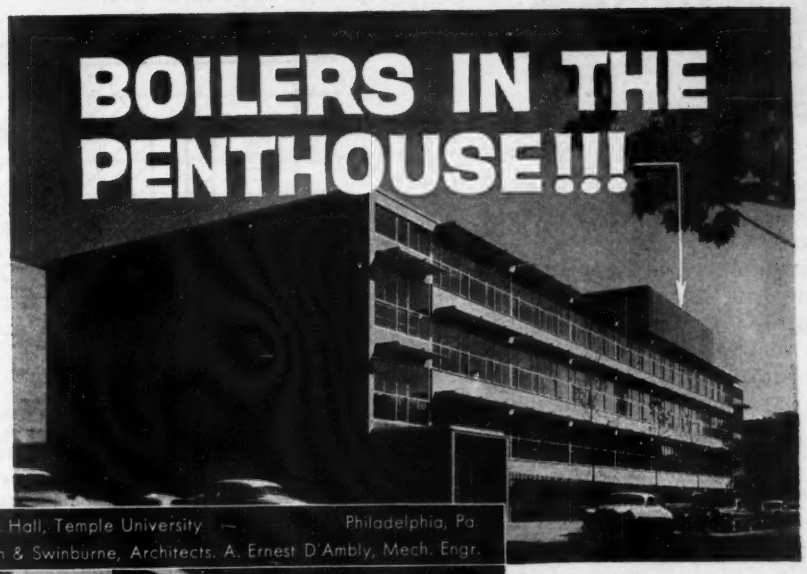
the building temperature dropped to 68°F. in an office or factory building . . . because at that time the workers leave the building.

Obviously vast amounts of fueloil can be saved by proper engineering of building temperatures, by skillfully arranged temperature set-backs for nights, weekends, and days of no work, in a factory or office building occupied about 40 hours a week. But without proper engineering of the building temperatures, maximum fuel savings related to temperature set-backs simply cannot be attained.

After preparing a curve to match the thermal charactertistics of the building and its heating plant, and to match the hours the building must be comfort heated each day, all in terms of different outside temperatures, you can use the curve to find out when the heating plant should be started mornings and stopped afternoons or nights during different kinds of outside temperatures. You can have a building employee turn the heat down or off at the proper time to match the outside temperature. You can use a time-switch to turn the heating plant on in the morning, but to be of practical value the time-switch must be of the type that's re-set manually each day when the building heat is reduced or turned off.

In setting the time-switch each day for the hour the heat will start the next morning, the building employee must take into account what he thinks the outside temperature will be the following morning. That's because cold mornings must have early starts for the heating, else occupants will be chilly in the morning when they should not be. Mildly cold mornings need relatively late starts for the heating, for heating start-ups unnecessarily early waste much fueloil.

Turning off the heat unnecessarily late in any building also obviously wastes much fueloil—to save most fueloil, the heat must be turned off at the proper time to match the outside temperature.



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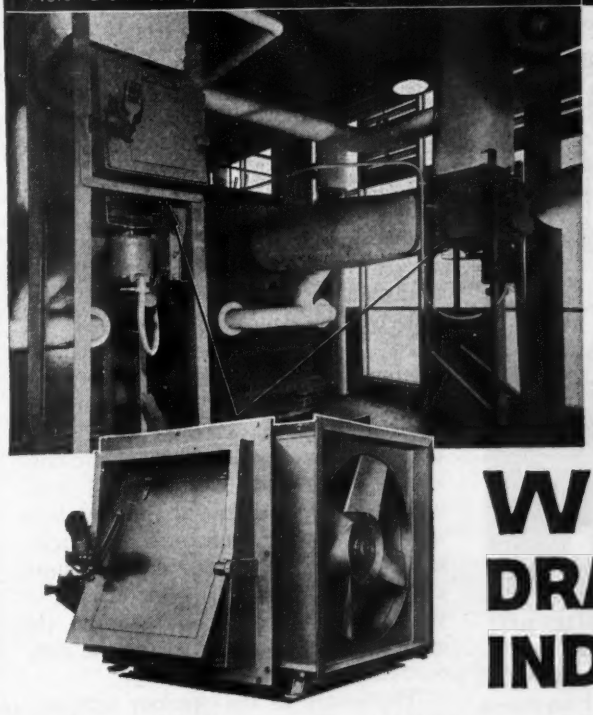

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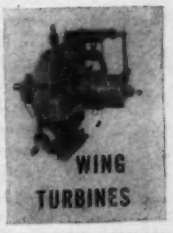
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The above points prove the inadequacy of using a simple time-switch, set for one heat-off time and for one heat-on time, in an effort to save maximum fueloil through the night set-back method. Even changing the setting of a simple clock several times a year is inadequate.

Accompanying Fig. 2 proves that! This chart shows the daily outside temperatures in Chicago during a typical heating season. Swings in outside temperatures of almost 70°F. show in the chart in less than one week's time. The chart shows extremely cold days in spring and fall, and mildly cold days in mid-winter.

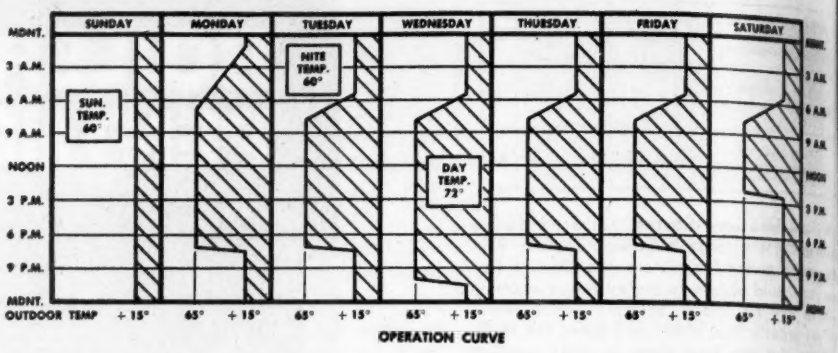

Fig. 5—The above program shows how a seven-day "Weather Re-Set" time-switch can be adjusted to start and stop the heat properly in an office building in different kinds of outside weather. This time-switch is not a complete temperature-control system for a large building, but works in conjunction with either (1) a room-type day-night room thermostat, or a day-thermostat and a night-thermostat, or (2) any large-building heat-control system affected by outside temperatures, which is designed to provide comfort temperatures during building-occupied hours, and to provide reduced building temperatures nights. The above program is based on: building unoccupied from 7 PM to 8 AM except on Wednesdays when it is occupied until 10 PM; no weekend occupancy from 2 PM Saturday until 8 AM Monday; building warm by 8 AM including Saturday; earliest set-back at 7 PM—except 10 PM Wednesday and 2 PM Saturdays.

Recently, Automatic Devices developed "Weather Re-Set" time-switches to eliminate all guess-work from setting a time-switch which controls a heating system. These have temperature-sensitive elements, located outdoors and connected to the dials in the control cases, which change the time of the switching action to have it conform to the slightest changes in outdoor temperatures, every morning and every afternoon or night. The engineer who adjusts the controls simply sets a dial for the comfort hours he desires.

Thereafter as the outdoor temperature drops, in the morning the "lead" is greater—the heating starts earlier and earlier automatically on days which are colder and colder; and on the colder days the building heat is turned off later and later so that room temperatures are not lower than 68°F. at the end of the comfort-hours period.

These "Weather Re-Set" time-switches also switch automatically at night to day-heat programming of the building heat, when the outside temperature drops below a certain, preselected temperature. At night the heat should be switched to day-heat programming when extremely cold weather arrives—when the outside temperature drops to 10 or 15 degrees above the outside temperature which in the daytime requires the full capacity of the heating system to "hold" building temperatures.

In New York City, for example, an apartment house may have a skimpy heating plant which barely can keep the rooms at 70°F. when the outside temperature is at 10°F. Full-blast heat should be turned on in this apartment house at night, when the outside temperature drops to 20°F. or 25°F. (these numbers are 10 and 15 above the 10°F. that daytimes requires full capacity of the heating plant).

The outdoor temperature-sensing element of a "Weather Re-Set" time

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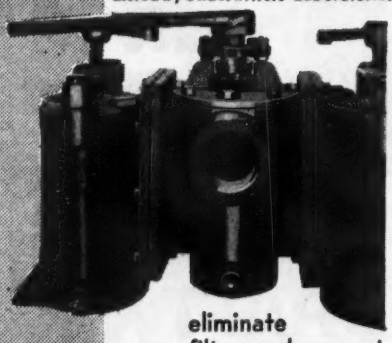

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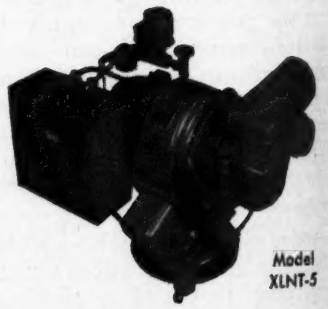

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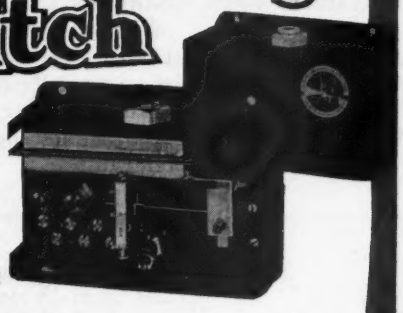

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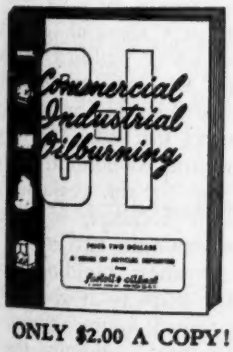

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. . . . Night Set-back

switch performs still another fuel-saving chore. It automatically stops the input of heat to a building when the outside temperature rises above a preselected high level, which can be about 65°F. for apartment houses, and factory and office buildings. This minimizes over-shooting of room temperatures on mild days, gains appreciable fueloil savings, adds to occupants' comfort, and decreases air-conditioning cooling loads and costs on days when heat is needed early morning but cooling is needed later, afternoons.

In garages, warehouses, hangars, shops, etc. where daytime temperatures are no higher than 45°F. or 50°F., the "Weather Re-Set" time-switch should be adjusted to cut off the daytime heat when the outside temperature rises to within about 5°F. of the inside daytime temperature.

Using any large-building heat-control system that paces the building heat to match outside temperatures, you should provide for an early-morning heat pick-up period during which the full capacity of the heating plant is used. You can do this using a "Weather Re-Set" time-switch equipped with two special switches. The first switch, which snaps shut earlier and earlier as the outside temperature becomes lower and lower, causes the oilburner to start and to try to run continuously—actually only the high-limit control (and the low-water control of a steam boiler!) can stop the oilburner during this part of the cycling. Later the second special switch snaps at a pre-selected time and starts oilburner on-off cycling aimed to maintain the building at the proper daytime temperature.

Fuel Savings

Fig. 3 is a table compiled some years ago from Weather Bureau reports by the Fuel Conservation Council for War, Automatic Controls Industry. It shows the fuel savings that result from lowering building temperatures only 10°F. at night. In New York City, for example, an 18% fuel saving results from only a 10°F. drop for 12 hours—of the temperature of a factory or office building. As was indicated earlier in this article, night-time heat set-backs can be far greater than 10°F., and business buildings occupied only about 40 hours a week need comfort temperatures during only the relatively few hours they are occupied each week. In such buildings, precise engineering, applied to the heat set-back programming, can produce fuel bills amazingly low. Sloppy, unorganized night and weekend heat set-backs have produced fuel bills 10% to 15% lower than they would have been without heat set-backs—whereas highly intensive, well-engineered heat set-back methods have produced fuel savings of 30% to 35%.

Use of the new ideas in this article lead to much lower building temperatures for the "no-heat" or "low-heat" hours than are desirable or safe using ordinary control methods. This is particularly true and economical for protracted periods—for the weekends, and weekends with holidays, of business buildings, for example.

In many business buildings rooms are being kept stupidly at about 50°F. during unoccupied hours—nights and weekends. In these buildings, the oilburners stupidly are being started, every morning when comfort heating will be needed, about two to three hours before workers start arriving. Vast amounts of fueloil are wasted by (1) little lowering of temperatures nights and weekends, and (2) early heat start-ups every morning when heat is needed.

Vast amounts of fueloil can be saved, therefore, by switching to control set-ups having the features described in detail in this article; briefly:

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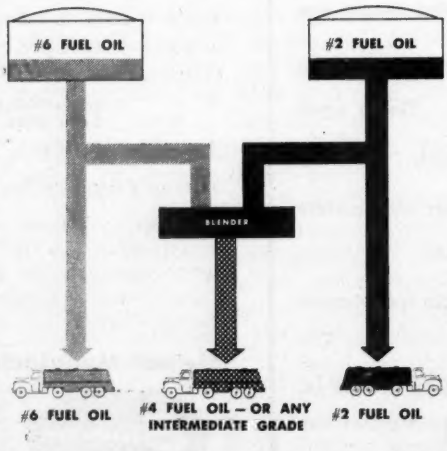

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2. Automatic switching to daytime type of heating on the five or ten coldest days of an extremely cold winter—especially for heating plants not of generous capacity for the loads they carry.

3. Automatic cut-off of heating immediately when outside temperatures reach a certain pre-selected level, about 65°F. for buildings maximum heated to 70°F. or 72°F.

These new control ideas, in addition to saving vast amounts of fueloil, provide positive assurance buildings will be warm when occupants arise (in apartment houses, hotels, and motels) or when workers first enter office buildings, factories, etc. Emphasizing this assurance, electric-current failure as long as 30 hours will not affect a "Weather Re-Set" time-switch with a built-in spring-action to supplement its synchronous electric clock.

"Weather Re-Set" time-switches are available for one-day programs, and for seven-day programs. Using a seven-day program model, the building operator can adjust for as many hours of heat as he desires, for each day of the week. On any day of the week, heat starts and stops as he desires. And with holidays ahead, he can set up an entire seven-day heat program—he can set this up one week in advance.

These new control ideas open up new avenues to save fueloil in buildings already built. For new buildings, they can reduce the costs of the complete, oilfired heating plants—for they eliminate the need for the "extra-reserve pick-up capacity" which in the past was added as standard to a heating plant to insure enough heat, early enough on coldest mornings.

Orr & Sembower establishes traveling service School

A TRAVELING service school has been established by Orr & Sembower, Inc., Reading, Pa., manufacturers of packaged heating equipment, to supplement its regular summer service school program at the Reading plant.

Director of both the traveling school and the annual service school will be Theodore Schladitz, previously manager of the service department. Schladitz will visit Orr & Sembower representatives during the year on a regular schedule.

Petrometer Corp. publishes Catalogues on product Line

A SERIES of catalogues have been issued on the different items manufactured by Petrometer Corp., Long Island City, N. Y.

Dimensions and applications for industrial liquid depth gauges, manifold and duplex manifold valves, Liquidepth safety cleanout valves, and specific gravity indicators are described.

The catalogues are available upon request to the company.

Hannasch is named Charlotte branch Manager by Honeywell

NEW MANAGER of the Charlotte, N. C., branch sales office of Minneapolis-Honeywell Regulator Co., Minneapolis, is D. H. Hannasch.

He succeeds L. Frank Lawrence, Jr., transferred to Cocoa Beach, Fla.

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Readers' Problems

COMMERCIAL & INDUSTRIAL oilburning

Q. Many thanks for the help you have given me in the past. I am "in the middle" on two jobs. We added motorized valves to steam systems, making them two-zone jobs.

As both are similar, I describe the worse, which is a two-story building with boiler rated 1,800 sq. ft. net steam, two unit heaters of 500 sq. ft. each on one circuit with reverse-acting pressure controls, and regular steam radiation on the other circuit. New steam-main quick vents have been installed, and providing enough heat is no problem. Overhead steam mains feed some radiators, and all thermostatic traps of these have been replaced by new ones.

The trouble is terrific hammering.

Big question is: Can the trouble be ended without installing a condensate receiver and pump to return the water to the boiler?

All radiation is well above the boiler and the water returned to the boiler nicely before I installed the two motorized steam-main valves. When both motorized valves close about the same time (controls are adjusted so burner stops as soon as valves start to close) the steam pressure has been observed to increase from one lb. to three lbs. while the burner is idle. We know the boiler water leaves the boiler through the returns under these conditions, but an automatic water feeder protects the boiler. High-limit control on steam boiler is set at two pounds.

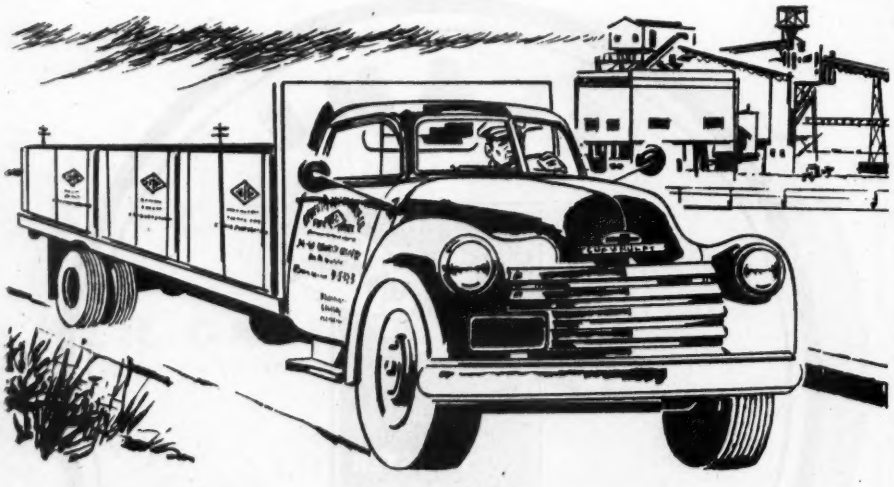
Should we bypass the motorized valves with ⅛" pipe to get rid of the boiler steam-pressure with both valves closed? Should we run a ¼" or ½" pipe from boiler side of the motorized valves to the house side of the check valves in the returns? What do you think of doing both to try to equalize the pressure between the boiler, steam mains, and returns? Have you any better suggestions on getting the water out of the returns and into the boiler without using a pump?

W. H. B., Brielle, N. J.

A. The article on zone control layouts for big steam systems, which starts on p. 68 of the February 1956 issue of FUELOIL & OIL HEAT, covers details of your trouble so fully that it appears to have been written precisely for you.

These steps will end the trouble inexpensively without your having to change any piping.

First, replace the steam-pressure control now on the boiler with a con-



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trol that can be set to stop the burner with ounces of pressure on it, instead of pounds. Set the new high-limit steam-pressure control at the lowest steam pressure that heats all the radiation nicely. First try four ounces of steam pressure, as the maximum the boiler develops. Increase this to eight ounces, if you have to. If necessary, air-vent much faster certain steam mains, radiators, etc., to cause them to heat promptly and completely with only ounces of steam pressure on the boiler.

Second, install on the boiler a Series 20 steam-pressure control, set at eight ounces higher pressure than the new steam-pressure high-limit control is set. Wire this new Series 20 pressure control to the larger of the motorized steam-main valves—in such a way that the valve opens and remains open when increasing steam pressure on the boiler trips this new Series 20 pressure control. You can easily obtain the wiring diagram for this, if you don't know it, from the manufacturer of the motorized valve. If the steam pressure increases eight ounces after the burner is stopped by its high-limit steam-pressure control, the new Series 20 pressure control will open the larger motorized valve only long enough to drop the steam pressure on the boiler to its proper maximum.

Third, on a job of this kind, make certain to use the lowest gph firing rate that provides excellent heating on coldest mornings. Using a needlessly high firing rate will cause the burner to start and stop often, by action of its high-limit steam-pressure control—especially when only one zone needs heat. In general, use of a relatively low gph firing rate avoids trouble on jobs of this type.

Q. Shouldn't the sizes of built-in electric oil heaters, in horizontal-cup burners, be doubled or tripled in general, now that residual oils used by these burners are becoming heavier and heavier?

C. A. H., San Francisco

A. A far better course lies in providing the suction lines of these burners, or the lines giving oil to the burners on pump-set jobs, with extremely large automatic electric heaters for use starting up with boilers cold. During cold start-ups, give the burners fuel-oil heated to 120°-150°F. range by these suction-line electric heaters. Then you will not need larger electric cup-line heaters in the burners.

Q. On a two-pipe steam school job, the condensation pump in a pit starts and stops many times a day when no heat is needed. Shouldn't I wire the condensation-pump motor so it can't run unless the burner motor runs.

K. H. S., Chicago

A. No! You'll find a check valve in the line from the condensation pump to the boiler. This valve is leaking when it's supposed to be closed, and boiler water is trickling back to the condensation tank all the time the pump is idle. The usual remedy is to replace the leaking check valve. To be exceptionally thorough, install two good check valves in series.

(*Please turn to page* 141)

Preferred Anti-Syphon Valves
Meet Every Code

Non-Adjustable—Angle Type for convenient installation. Heavy Bronze Construction. Approved by Underwriters' Labs., Inc.

TYPE A—1¼" to 3". Maximum capacity to 1000 G.P.H., with #5 and #6 oil.

TYPE B—¾" and 1". Maximum capacity to 100 G.P.H., for #1 to #5 oil.

TYPE C—⅜" and ½". Maximum capacity to 30 G.P.H. of #1 to #3 oil.

Write for Bulletin 1619

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TODD DEPT. 4, PRODUCTS DIVISION
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SAFETY SWITCH
THAT SHUTS OFF FUEL IF BLOWER FAILS

Protection for Oil Burners • Industrial Ovens • Power Gas Burners

WHAT IT DOES

The Dewey Safety Air-Flow Switch protects against opening of fuel valve until fan is up to speed.

Insures purging of furnace before fuel valve opens. Closes fuel valve if fan slows up or stops. Flashes danger signal if fan or fuel stops. Safeguards against danger from gas fuel failure when used with safety shut-off valve.

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Dewey SAFETY AIRFLOW SWITCH

National Warm Air Association has summer Convention on Coast

IT SEEMED to be a situation where everybody was happy. San Francisco was honored to have the National Warm Air Heating and Air Conditioning Association hold its first Pacific Coast Session in the City of the Golden Gate on June 5, 6 and 7. The National Association received the cooperation of Institute of Heating & Air Conditioning Industries of Southern California (IHACI), Warm Air Heating Institute of Northern California and Portland Warm Air Heating & Air Conditioning Association of Portland, Oregon.

Convention General Chairman J. F. Deane, Tuck-Aire Furnace Co., opened the convention Wednesday afternoon by expressing his appreciation and pleasure that San Francisco had been chosen as the location for the summer convention this year. He justified the choice by stating that there are approximately 2,500 warm air dealers, and about 40 furnace manufacturers on the West Coast produce close to 30% of the furnaces produced in the nation.

The President of the National Association, F. L. Meyer, Meyer Furnace Co., was presented and assumed the responsibility of presiding over the afternoon session. He remarked that the first meeting on the Pacific Coast was significant of the fact that the industry has no climatic or geographical boundaries. Meyer referred to the West as having vigor and enthusiasm, and indicated that the conservative East could listen and learn from their Western associates. The great distances are becoming smaller, but we must remember that we have a large nation with large markets. We must not lose sight of the fact that in the final analysis we have one boss, the American consumer, and that a united effort is necessary to please that boss.

George Boeddener, Managing Director of the Association and his assistant, James M. Martin, were introduced and Boeddener presented a few points of interest about the National Association. Since it was organized in 1914, National Warm Air has invested $1,000,000 in manuals; manufacturer members include 80% of those in the industry; $300,000 will be spent in 1957 for industry promotion; new 1957 housing is expected to be 10% less than in 1956 and "Nothing pays better than a good idea."

C. W. Nessell lived up to his reputation in driving home a message on the "Unexploited Market." He explained that his employer, Minneapolis-Honeywell Regulator Co., has had him operating the mobile laboratory of the Association for the past seven or eight years. More than 250 thorough investigations, each lasting more than a week, have been made in addition to several hundred lesser ventures by the self-termed "Snooping committee."

He made his audience realize how poorly good heating is being sold. "We talk of indoor comfort, but up to now have failed dismally to define it."

In conclusion Nessel said, "Field investigations show that the homeowner is being gypped on the indoor comfort we promised him because we, as an industry, have failed to properly design, install, and most importantly, adjust the warm air heating and cooling installations entrusted to our care. We have the know how, but it is of little avail or benefit to the homeowner if we fail to use it on every job. . . . Every unsatisfactory job is an indictment of our industry's skill, honesty and integrity. In this era of jobs cut to the bone for a low price, the blame rests upon the shoulders of every level of trade . . . If changes are needed, let's make them . . . There is no reason under the sun why we should not tell folks and sell folks what they need, and charge for it accordingly. . . . He who serves others also best serves himself, and an upgraded job means money in the till."

"Costs, do you know yours?" was the subject of a dissertation by M. E. Sale, Slakey Bros., Sacramento. As an accountant, Sale expressed his firm conviction that many firms sell on the basis of, "Ours is best," rather than develop correct price structures based

upon accurately determined costs.

With Roland R. Taylor of Fraser & Johnston Co., as Moderator, a panel of six builders and heating/airconditioning dealers pictured on page 84, voiced their experiences.

M. E. Rutledge, President of Associated Sheet Metal Industries of Seattle, Wash., presided at the morning session on Thursday.

The first speaker, I. M. Remen, Lennox Industries Inc., was assigned the subject, "Perimeter Heating and Air Conditioning." He made the flat statement that the perimeter system has been the greatest step in 50 years. This prompted a discourse on the value of ideas.

The Association has the greatest possible source of ideas through cooperation with research agencies. These ideas are available to the entire industry. Too many manufacturers, it was felt, do not belong to this organization which develops the ideas at negligible expense to each member.

Several striking examples of outstanding successful operations due entirely to "ideas" were cited. These suggested the conclusion that with perimeter heating and airconditioning, the warm air industry is in an enviable position. With enthusiasm and confidence the results can be sold. If this is a hard selling year it will be good for the industry, for hard selling is better selling.

"Certified Heating" was the subject of N. N. Leas, Sheet Metal and Air Conditioning Contractors National Association. He brought out the fact that a price squeeze is usually a quality squeeze.

Certified electric wiring and certified plastering is being sold to the public on a nationwide basis. The public must be sold on certified heating—This raises standards and with public demand established, certified heating will be competitive with other certified heating, rather than with low cost substandard heating. Leas insisted that certification should never be considered a substitute for salesmanship. Also, it will not eliminate cut-throat competition.

It was Leas' opinion that you cannot put a price tag on certified heating. The certification must designate a certain kind of heating rather than a certain price.

G. A. Ashburn, Culver City, Calif., National Heating and Airconditioning Wholesalers, Inc., spoke on the "Wholesaler's Place in the Warm Air Heating Industry." He contended that the wholesaler has proved to be necessary. He emphasized the fact that a good wholesaler must be a complete line wholesaler. He should never retail goods or compete with his customers.

"What's doing on the Pacific Coast" as a subject, afforded an opportunity for western organization leaders to tell of progressive steps being taken which might be of interest to National Association members.

Education Opportunities

The final speaker of the Thursday Morning Session was Dr. H. P. Hayes, California State Polytechnical College. Dr. Hayes spoke on the subject, "Opportunities in Air Conditioning through Education."

The portion of Hayes' talk of greatest interest to the convention was that Cal-Poly has a Heating, Ventilating and Air Conditioning course. The course is so arranged that each year of study prepares the student for employment. At the end of one year the student has had both practical and technical training which will make him valuable to an employer.

A certain amount of mathematics and science work is included with courses on airconditioning, which contribute toward a degree in engineering. If the entire course is completed, courses in management, public relations and other subjects which would be required in conducting an airconditioning business are included.

Dean Hayes stated that, whereas graduates of other courses followed many professions or types of business other than what their degrees would indicate, 95% of their airconditioning graduates stay in the industry.

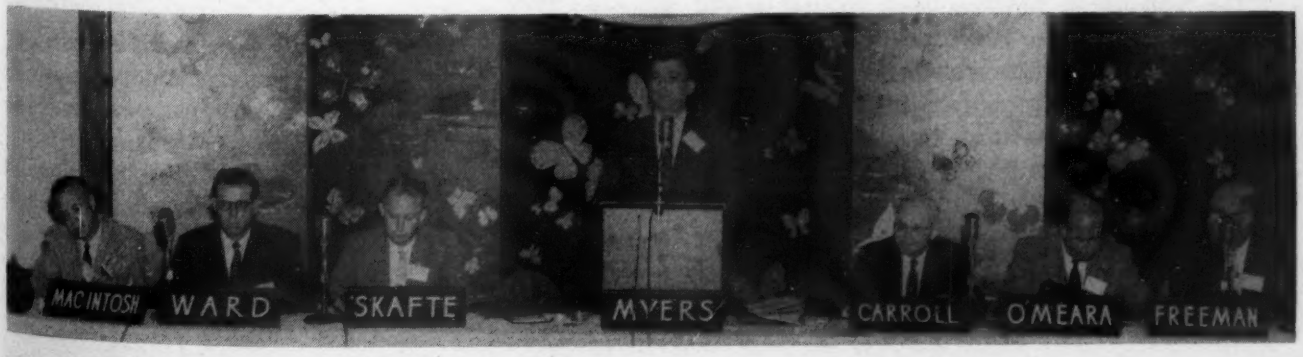
Tyler Macdonald, Hixson-Jorgensen, Inc., Los Angeles, was the guest speaker at a luncheon session Thursday noon.

Thursday afternoon R. N. Hall presided. H. T. Gilkey, Technical Secretary - Research, NWAHACA, Cleveland, presented a paper entitled, "Consumer Attitudes Toward Airconditioning." Available space will only permit a few highlights.

Studies indicate that: Consumers like things they cannot afford—customers have not been sold, but have bought through influence of neighbors having airconditioning—81% of owners interviewed talked to only one company about airconditioning—the man next door is the most effective advertising.

Insulation, orientation, air flow rates, noise and other problems and solutions of a technical nature proved that airconditioning demands more than casual consideration.

An airconditioning panel discussion was next on the program with E. A. Myers, Jr., Prentiss Corp., Los Angeles, as moderator. Sales, Engineering, Installation, Controls and Service were approached by men with both technical and practical experience.



Fueloil & Oil Heat's

OIL HEATING Service Managers JOURNAL

NATIONAL ASSOCIATION OIL HEAT SERVICE MANAGERS

Volkswagen shows up well in Use as service Truck

THE FOLLOWING REPORT was submitted by Hugh W. McKee, Massachusetts Wharf Coal Co., Boston, on the use of a Volkswagen as an oilburner service truck over a five-month period.

"We have been running an experimental test for the past winter from October 1 through the end of February on a Volkswagen panel delivery truck for our oilburner servicemen with the results shown in the table compared with a leading American panel sedan.

"We have found the Volkswagen to be very efficient from a service standpoint. It has a lot of room inside so a man can very easily stand up. Also, it has a side door entrance off the sidewalk for a serviceman to get his equipment in and out of the truck. It is also equipped with shelves and racks and it is actually a stock room on wheels.

"Our servicemen are enthused about this new truck as it is easily handled, has a panoramic windshield and rides comfortably. It does not require anti-freeze as it has only a 36 hp air-cooled engine. It has a lot of good features which adapts it readily for oilburner servicing.

"The Volkswagen furnishes good advertising media as it has a good size panel on the side for your own type of lettering. I find it attracts attention when it goes down any street. We are keeping a record of the cost of this truck and find it ahead of any we have used so far. It will hold approximately a ¾-ton load. We had no difficulty in winter as it seems to have good traction on the rear wheels.

"This discussion is intended only as a point of information in service transportation equipment. I am quite sure that we all should be on the alert for more efficient means of conducting our service business."

Truck	*Gas Consumption*	*Cost*	*Repairs, Oil, Grease, Etc.*	*Total Cost*
Volkswagen	295 gallons	69.33	45.71	$115.04
American	654 gallons	153.69	60.58	$214.27

Showing approximately a saving of $100.00 for a five-month operating period.

More on efficient Service and its Effect on Customer

JOHN E. CAMPBELL, Smedley & Mehl Co., Ardmore, Pa., and national past president of the national association, sent along these comments, inspired by the piece which appeared in the June issue from Arthur H. Lipson.

In a brief article, "Efficient Service contributes greatly to customer Satisfaction," he emphasized the importance of providing good, painless service and keeping oilburning units in tip-top shape. Campbell agrees with Lipson in every respect and adds:

"The neatness of our servicemen when answering calls, along with the neatness, cleanliness and the manner of customer approach is a definite must.

"Our men must be congenial, even though they have had an experience such as the 'Serviceman's Lament,' (FUELOIL & OIL HEAT, May issue). They must render honest, efficient service and last but far from least, clean service. It costs nothing to ask Mrs. Homeowner for old newspapers to spread on the floor and when finished to ask where the disposal can is kept. It costs nothing to ask for a dust pan and brush to clean up the powdered plaster after installing a thermostat or replacing smokepipe or a dozen different dirt-making jobs.

"I can promise this, if we are positive our servicemen work in this manner, we are going to receive call after call complimenting our firms upon the efficient and neat manner with which there job was handled. I know we have. Therefore, we are going to have satisfied customers. If customers are satisfied with the manner of service they receive, you can be sure they will never even think of competitive fuels."

Service Managers have Meeting during Boston oil heat Show

JUNE 5 was the date of a meeting in Boston of service managers, arranged to coincide with the 1957 Biennial Exposition of Oil Heat and Domestic Cooling. Place was the Oval Room of the Sheraton-Plaza Hotel. A total of 42 members attended a very successful meeting.

The chairman of the meeting, Norman Crew, Carney-Young, Cambridge, Mass., dispensed with a regular business meeting and opened it up to general discussion. A lengthy exploration of gas heat competition resulted in an expression that it was up to the service manager and his department to be sure that the heating equipment was maintained properly in an efficient manner, that periodic tests be taken to insure this and that any necessary measure be undertaken to upgrade the overall performance of the oilheating system.

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to the editor by the 5th.

New England OHI announces Fall Schedule for Schools

THE FIRST of three groups of oil heat service schools sponsored by the Oil Heat Institute of New England will begin September 9 in Salem, Mass.

As in other years the schedule has been set up on a five day basis with each city in the swing meeting the same day of week for ten sessions. The school will be at 5 Broad St., Salem, Mass., on Mondays; at the New State Office Building, Augusta, Me., on Tuesdays; Y. M. C. A., 70 Forest Ave., Portland, Me., on Wednesdays; Y. M. C. A., 30 Mechanic St., Manchester, N. H., on Thursdays; and at the Fire Department Headquarters, Keene, N. H., on Fridays.

Industry Speakers

Combustion, nozzles, air patterns and drafts will be covered by Ralph Dennis, Boston Machine Works, during the first week. The national director of dealer training will present the Williams Oil-O-Matic low pressure servicing story during the next two weeks.

Penn Controls will also provide the program for two weeks with a discussion of general control systems and control zoning. Other manufacturers who will lend training personnel for a week are Winkler, Detroit Controls, General Electric, Bell & Gossett, and Bacharach.

These schools are presented through the cooperation of the local Oil Heat Industry Committees. For further information contact Ivan C. Sutherland, director of education, Oil Heat Institute of New England, 839 Beacon St., Boston 15, Mass.

OHI Insurance Trust adds budget plan Protection

THE INSURANCE TRUST of the Oil-Heat Institute of America, Distribution Division, New York 36, N. Y., has made available to member dealers budget payment insurance covering fueloil and service. The budget plan customer, without cost, is insured to the extent that if he dies from any cause the balance outstanding on the plan at time time of death is paid to the fueloil dealer.

The insurance covers all fueloil and service established on a budget basis for customers under 65 years of age and up to a maximum of $1,500 for each account. Coverage does not apply to institutional or corporate customers.

The basic premium cost is 60¢ per month per $1,000 of outstanding budget account balances. For example the gross expense for a $200 account on a 10-payment basis totals 66¢. the total expense for a dealer starting 10-

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DEALS YOU 4 ACES

♠ A Sinclair Fuel Oil Distributorship puts you in a preferred position in the industry. Sinclair Fuel Oil is a *preferred* product because it's a *superior* product—thanks to continuous research and improvement at Sinclair's huge laboratories in Harvey, Illinois.

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♣ No worry about supply! Sinclair's tremendous production and storage facilities mean a steady, dependable source of supply.

♥ An informative sales training program strengthens the hand of Sinclair Distributors.

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quickest way* to speed handling, lower costs . . .

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From the largest manufacturer of centrifugal pumps come these rugged, compact Motorpumps, designed specifically to meet your requirements for faster, more economical liquid fuel transfer.

Motorpumps are self-contained units, easy to install, and they operate at peak efficiency with a minimum of maintenance. For years Ingersoll-Rand Motorpumps have set the standard for design and construction and for unmatched performance.

Get the story today on how Ingersoll-Rand Motorpumps can speed your operations, speed up your deliveries—increase your profits—at no increase in operating costs! Contact your Ingersoll-Rand branch or dealer or write for latest bulletin.

MOTORPUMP

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11 Broadway, New York 4, N. Y.

Sizes from ¼ to 75 horsepower—5 to 2800 gpm capacities

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payment budgets totalling $50,000 comes to $165 for the budget year.

Dividends are payable as earned in accordance with the terms of the Trust Agreement. Complete details and brochure are available from Oil-Heat Institute Insurance Trust, 500 Fifth Ave., New York 36, N. Y.

OHI of Washington sponsors School on oilburner Service

A COMPLETE training course in all phases of oilburner service is being sponsored by the Oil Heat Institute of Washington in Seattle, Wash. After completing the course, successful graduates will be certified by OHI.

The 11 week daytime course began June 24 and will continue through September 6. Emphasis is being placed on laboratory work along with lectures and exams on fuels, controls, burners, burner parts and servicing, heating plants and building codes.

Instructors for the school are Dr. E. W. Gardiner, California Research Corp.; Chester Lovas, Rossoe Manufacturing Co.; Ray Williams, Diesel Oil Sales; Thurston Ley, Electro-Watt, Inc.; and Wally Breeden, Pacific Automatic Heating Co.

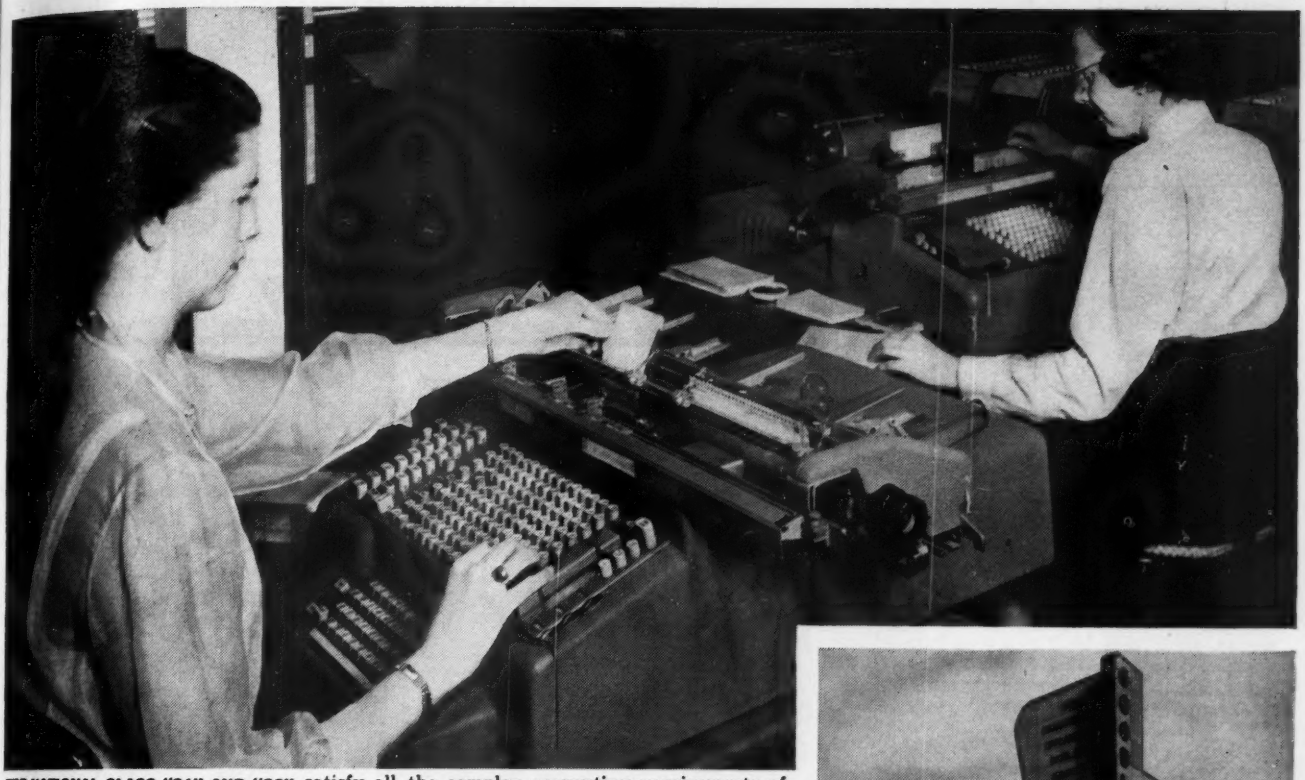
Classes have been limited to 25 students and tuition was set at $300 with a $25 discount for employees of OHI members. Free placement service will be available to graduates.

Empire State Petroleum Group sponsors management Institute

THE EMPIRE STATE Petroleum Association, Inc., New York, N. Y., sponsored its first management conference on July 23-25 at Cornell University, Ithaca, N. Y.

Financial problems were discussed by a panel made up of representatives of the Small Business Administration, a banking house and an insurance company and moderated by L. T. White, Cities Service Petroleum, Inc.

Faculty members of Cornell's New York State School of Industrial & Labor Relations directed sessions on human relations, community relations and research, and responsibilities of managers. George D. McDaniel, Socony Mobil Oil Co., was guest speaker at the banquet.



THE NATIONAL CLASS "31" AND "32" satisfy all the complex accounting requirements of the Goodling Electric Co. with dependable efficiency.

THE GOODLING ELECTRIC COMPANY'S fleet of fuel oil delivery trucks.

THE MODERN HEADQUARTERS of the Goodling Electric Co. in York, Pa.

"Our *National* System saves us $8,800 a year... returns 100% annually on investment!"

—Goodling Electric Co., *York, Pa.*

"When we installed our National System, we were looking for an accounting set-up that would absorb our seasonal increase without increasing expenses," writes R. Weigel, Treasurer of The Goodling Electric Co. "Our National System both keeps our records up-to-date and saves money for us.

"We have two National multiple-duty machines which handle all of our accounting jobs—even the most complex—with speed and efficiency. We use a National Class '31' for accounts payable, conventional accounts receivable, and general ledger.

We use a Class '32' for complete fuel oil accounting. This includes daily preparation of bills with simultaneous degree day accounting, cycle billing of all fuel oil accounts, and yearly maintenance contracts.

"Because they are so easy to operate, Nationals make it easier to train new employees, too. Our Nationals save us more than $8,800 a year, return 100% annually on our investment!"

Richard Weigel

Treasurer of the Goodling Electric Co.

Your business, too, can benefit from the time- and money-saving features of a National System. Nationals repay their original cost quickly, then return handsome yearly profits through savings. For complete information, call your nearby National representative today. You'll find him listed in the yellow pages of your phone book.

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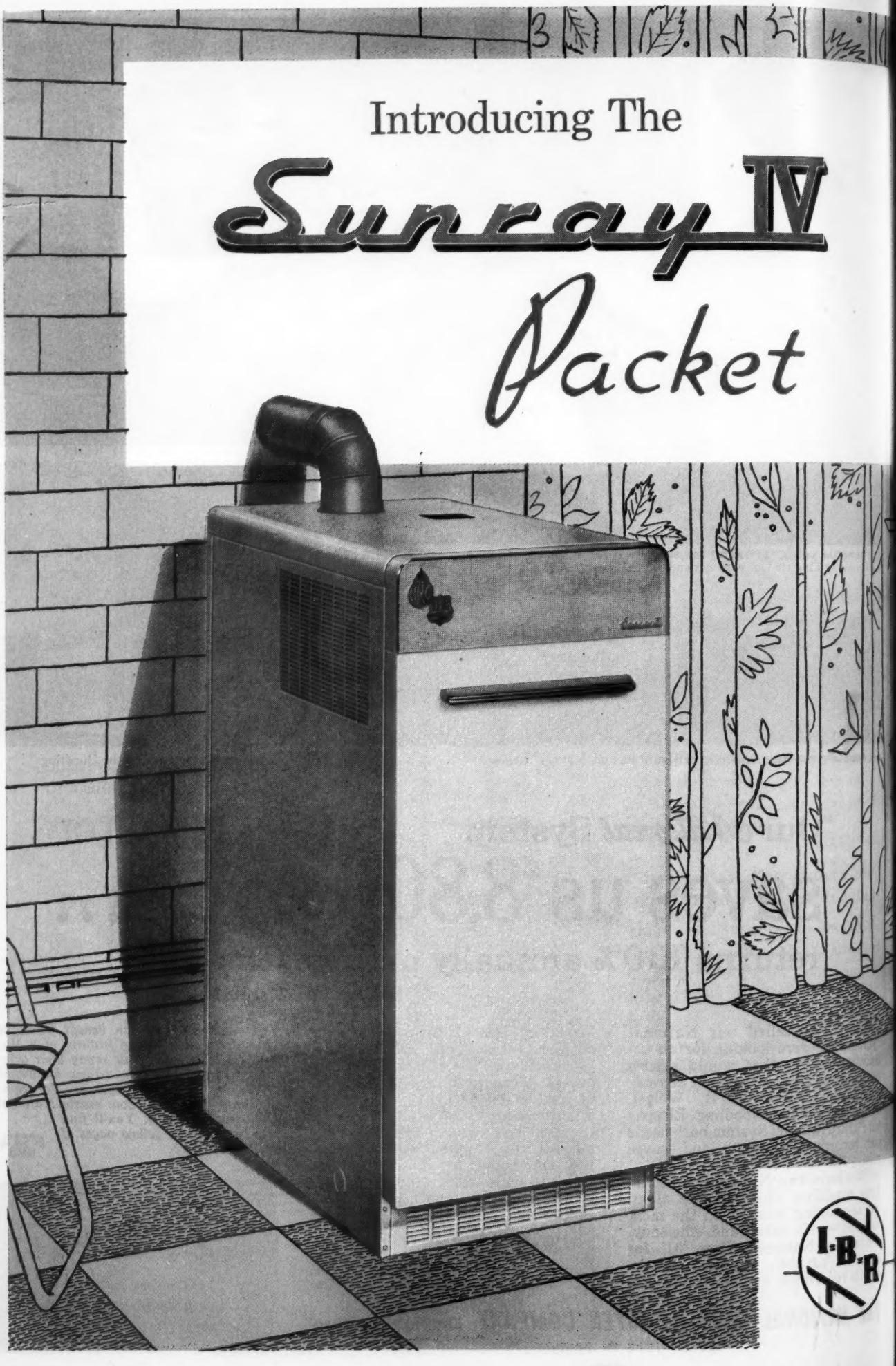
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- **Preassembled for easy installation**
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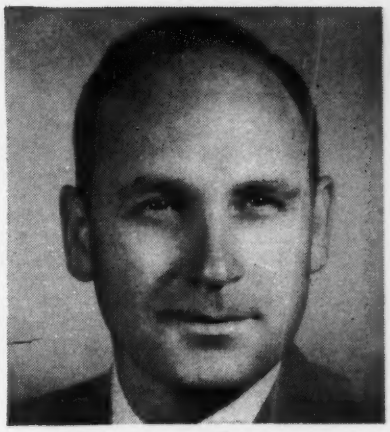
The Sunray IV Packet is an oil fired residential boiler for steam or hot water heating. It is also available as an Oil Heating Unit and as an Automatically Fired Boiler.

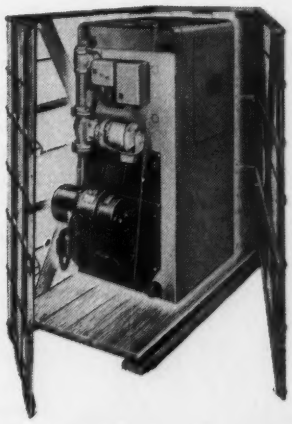
*HYDRONICS: *The science of heating and cooling with water.*



"Worth Waiting For"

Says *Paul R. Winters*
84 Trapelo Road
Belmont, Mass.

And you'll be glad, too, now that you can offer the finest in cast iron oil heating units for gravity or forced hot water heating, or for steam boiler replacement. The National-U.S. *Sunray IV* incorporates all the design and construction features you and your customers have been looking for in quality home heating. For the first time, here's a packaged heating unit with real sales appeal and *outstanding benefits* to you as a contractor.



National-U.S. Radiator

Sunray IV

All-in-One Automatic Oil-Fired Home Heating Unit

Packet

Send for free data

Write today for catalog on the new Sunray IV Packet and valuable sales aids available to National-U.S. contractors.

National-U.S. Radiator

CORPORATION

HEATING AND AIR CONDITIONING DIVISION
Johnstown, Pennsylvania

HA-17

OHI of Long Island plans big Parade for Oil Progress Week

TWO PARADES, featuring more than 200 trucks, floats and bands sponsored by the Oil Heat Institute of Long Island, will highlight Oil Progress Week this fall, according to Patrick F. Caputo, president.

One parade will start at Riverhead in Suffolk County and the other in Elmont in Nassau County. They will meet at the State University at Farmingdale.

Jersey Fueloil Distributors name Chairmen of Committees

THE BOARD of trustees of the Fuel Oil Distributors Association of New Jersey recently announced the following committee chairmen:

Walter Harnisch, budget & finance; William M. Norton, legislative; John Eggers, nominating; Ernest Studerus, Bunker C; William M. Norton, liaison; Robert Crane, membership; John Blondel, insurance; and Willard Hedden, Oil Heat Council.

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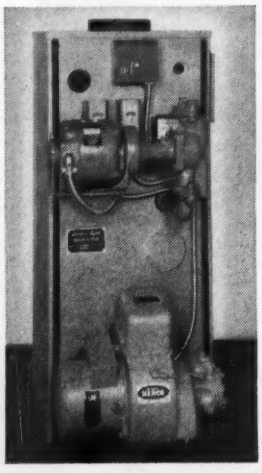
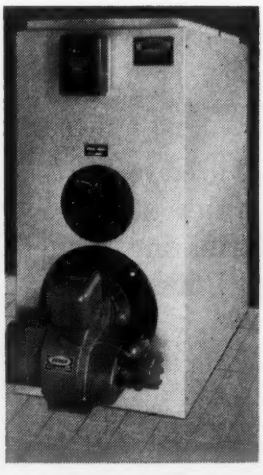
OIL THRIFTY HERCO

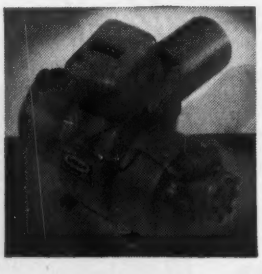
Complete Lines of Packaged Units . . . Individually Factory Fire Tested.



BOILER-BURNER UNITS *Five sizes—115 to 324,000 BTU. Complete with Herco Oil Burner and controls, ready to connect! Everything packed in one crate, shipped with unit.*

WARM AIR FURNACES *Lowboy, Highboy, Horizontal and Counterflow . . . 10 models in all. Completely assembled (incl. stainless steel combustion chamber and blower assembly). Everything packed in one crate.*





OIL BURNERS. *Dependable, easy to service. Loosen one thumb screw and entire ignition assembly removed. Individually fire tested at factory. Firing rates 0.50 to 20 gph.*

There is a complete Herco line (at the right price) for every type and size job. You get finest quality, lots of satisfaction, fewer service headaches.

Write for free catalogs today.

OIL THRIFTY HERCO

Herco Oil Burner Corp. Lancaster, Pa.

Dealers beat Manufacturers at the annual NYOHA Outing

A BRIGHT SUNNY DAY and the Engineers' Club in Roslyn, N. Y., were fitting backdrops for a spirited softball game on June 25 at the New York Oil Heating Association annual outing. Teams composed of dealer and manufacturer-jobber personnel competed in the traditional game. Ed Green managed the victorious dealer team; Harold Layman captained the manufacturers. Score was 19-6, but the dealers won only by virtue of a late inning rally, sparked by reserve power held back until the opportune moment by Manager Green.

Golf and other athletic events took place during the all-day outing. Festivities concluded with a dinner at which prizes for all events were awarded.

Tri-State Oil Heat Council will be headed by Williams

W. D. WILLIAMS, J. E. Kunkel Co., Upper Darby, Pa., has been elected general chairman of the newly formed Oil Heat Council. The Council will operate in the three-state area of Southeastern Pennsylvania, South Jersey and Delaware.

It was created to carry the oilheating story to the public in this area. Williams is a vice president of the Greater Philadelphia Fuel Conference out of which the new organization grew.

Membership is open to all dealers, refiners, wholesale jobbers, equipment manufacturers and distributors in the section.

Delaware Valley Association hears Predictions on Trucks

CHARLES HALE, White-Autocar Corp., addressed the June meeting of the Delaware Valley Fuel Oil Dealers Association, Glenside, Pa.

He said that truck manufacturers now are making the highest capital investments in their history for development and production of new equipment. Bigger payload and decrease in equipment weight factor without the sacrifice of safety will continue for years to come.

you'll notice a big difference with the superb new...

DELAVAN TYPE "W" NOZZLE

the industry's only *all purpose* nozzle!

Exactly, a truly *all purpose* nozzle. No need to worry about hollow or solid cone in the small burners because with Delavan Type "W" you can replace either pattern with improved fires on most of your jobs.

Remember Type "W" is a premium nozzle designed especially for small burners . . . *(where you need it most)*. Try an assortment of "W's" today. You'll find them to be a time-saver on your regular service work and ideal for trouble-shooting or for those real "fussy" jobs.

DELAVAN *Manufacturing Co.*

WEST DES MOINES, IOWA

Here's one reason why ad men leave home or at least get gray hair early. These two billboards recently were spotted side-by-side in Portland, Oregon. It's not often that two competitive fuels repose so close to each other so passively, but Dale Josephson, manager, Oil Heat Institute of Oregon, who sent along this view, reports that outside of a few chuckles and grins this "boo-boo" went almost unnoticed.

Heat-Resisting Sheared to Size

Advantages of Heat-Resisting Steel Combustion Chambers

- No breakage in shipment or handling
- Lighter weight lowers freight costs
- Quicker heating—greater efficiency
- Cleaner heat—better temperature control

Save time and money by fabricating your oil burner combustion chambers from sheared-to-size Ingersoll heat-resisting stainless steel.

This special steel is correct in analysis to withstand high temperatures . . . consistently uniform in quality . . . and has exceptional forming characteristics.

Ingersoll will custom shear it to your specified blank sizes, or multiples thereof (depending on size). And Ingersoll's flexible facilities are geared to handle large jobs or small ones with speed and precision.

Ingersoll does not fabricate combustion chambers

Write, wire or phone for details

Ingersoll STEEL DIVISION
Borg-Warner Corporation
New Castle, Indiana

Boiler-airconditioning Group names Fred Attwood President

THE NEWLY-FORMED Boiler and Airconditioning Manufacturers Association met recently and elected Fred R. Attwood, Spi-Rol-Fin Corp., president.

Gustav H. Koven, Waterfilm Boiler Co. and L. O. Koven Co., was named vice-president; and M. C. Turpin, for many years executive secretary of the American Society of Refrigeration Engineers, was appointed executive secretary of the new association.

The new organization intends to establish non-restrictive test codes and ratings for heating and airconditioning where inadequate or no codes exist.

H. E. Anderson heads Illinois Chapter of Heating Engineers

AT THE MAY MEETING of the Illinois Chapter of the American Society of Heating and Air Conditioning Engineers, Harvey E. Anderson was elected president.

Serving with him during this next year will be Herbert Kreisman, vice president; John C. Scott, secretary; and E. P. Heckel, Jr., treasurer.

Peter J. Marschall, general chairman of the 1957 annual meeting in Chicago was presented a special chapter merit award, and Harry Gragg, retiring chapter president, was given a past-president pin.

North Carolina Jobbers plan fall Convention in Asheville

GROVE PARK in Asheville, N. C., will be the site of the fall convention of the North Carolina Oil Jobbers Association, October 20-23.

The resort is located in the mountains. The group's annual meeting will be held during the convention.

Oil Heat Old Timers charter Boat for ocean fishing Trip

MEMBERS of Oil Heat Old Timers went deep sea fishing on July 23. Port of embarkation was Captree Basin on Long Island, N. Y.

Dave Hamilton, OHOT president, was captain of the outing.

YEARS AHEAD . . . Gas Furnaces
YEARS AHEAD . . . Oil Furnaces

Winter Air Conditioner with enameled Return Air Cabinet (an accessory). A modern Basement-Type Unit!
Oil Winter Air Conditioner. Burner and Refractory Firebox are installed and all interior wiring is done at the factory!
Gas Counterflow Unit with front Panels removed. Connection of the gas line, electricity and ducts completes the installation!

Typical of the better things coming your way from Moncrief, is the finest line of completely assembled and wired furnaces available today. Despite their outstanding good looks, more durable construction and advanced features for easier installation, these new Moncrief Furnaces are lower in price. They are available now as 75,000, 100,000, 125,000 and 150,000 BTU Gas Models, or 78,400 and 112,000 BTU Oil Models with both upflow and counterflow units ready in most sizes.

Any way you call it, Moncrief gives you a straight pitch every time!

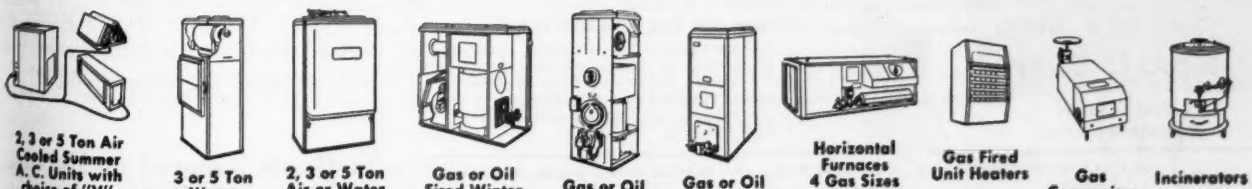
The old-line Moncrief organization of heating specialists puts the benefit of over 60 years of manufacturing experience into each and every Moncrief Furnace and Cooling Unit. And blended with this depth of experience, is a brand of sound engineering that adds every modern advancement in design and construction to any Moncrief Unit you select.

Your variety of selection is unsurpassed. Moncrief's complete line offers you every popular size of Oil, Gas or Coal Furnace — Basement, Utility, Counterflow or Horizontal, plus — 2, 3 and 5 Ton Air or Water-Cooled Summer Air Conditioners.

Every Moncrief Unit is competitive in price — so competitive that you can meet price competition, while supplying a product of excellence.

If you want to out-pitch your competition and win your innings of extra profit, see your Moncrief Wholesaler, today!

YOU HAVE THE BIG ADVANTAGE ON ANY JOB WITH MONCRIEF GAS UNITS



2, 3 or 5 Ton Air Cooled Summer A. C. Units with choice of "V" (Upflow) or "Flat" (Horizontal Flow) Cooling Coils

3 or 5 Ton Water Cooled Summer A. C. Units

2, 3 or 5 Ton Air or Water Cooled Gas or Oil Fired Year 'Round A. C. Units

Gas or Oil Fired Winter A. C. Units

Gas or Oil Fired Utility and Counterflow Winter A. C. Units

Gas or Oil Fired Gravity Furnaces

Horizontal Furnaces 4 Gas Sizes 4 Oil Sizes

Gas Fired Unit Heaters

Gas Conversion Burners

Incinerators

THE HENRY FURNACE COMPANY • *Medina, Ohio*

HEATING AND AIR CONDITIONING UNITS — MONCRIEF — FURNACE PIPE AND FITTINGS

Heat Exchanger Manufacturers set up Standards at Meeting

DURING the recent meeting of the Fuel-oil and Water Heater Manufacturers' Association at Williamsburg, Va., proposed standards for thermal design of high temperature hot water heat exchangers were discussed and finalized.

J. De Lorenzo, Manning & Lewis Engineering Co., Newark, N. J., was elected treasurer of the Association and three new directors were named: W. Veit, Manning & Lewis; B. Madorin, Water Tube Boiler & Tank Co., Chicago; and F. Gall, Bell & Gossett Co., Morton Grove, Ill.

Better Home Heat Council names committee Chairmen

CHAIRMEN for ten standing committees have been named by the Better Home Heat Council, Inc., Hartford, Conn.

They are Herb Krechevsky, advertising; Don MacDonald, major relations; Lou Giannettino, associate relations; Nick Pencheff, membership; Julius Larman, builders; George Rothstein, program; Bert Foley, finance; Phil Kaplan, public relations; Sid Berson, FHA, VA and government; and Merwin Sheketoff, technical.

The association sponsored an oil heat display for two weeks in the lobby of the Hartford National Bank and Trust Co.

Maine Dealers are sponsors of service Course, July 15-26

A TWO-WEEK, 80-hour concentrated course in oilburner installation and service was made available to members of the Maine Oil and Heating Equipment Dealers' Association.

Dates for the school were July 15 through 26 at the Maine Vocational Technical Institute in South Portland. The cost of the course was $45, with classes limited to 20 men.

Chicago Burner Association has Golf and Dinner Party

MEMBERS and guests attended the golf, dinner and prize party sponsored by the Burning Oil Distributors and the Chicago Oil Burner Association on June 25.

Activities were held at the St. Andrews Country Club. Chairmen of the event were Regis Plante and Chuck Staley.

Rockland Co. (N. Y.) Dealers have anniversary Celebration

FUELOIL DEALERS of Rockland County, N. Y., celebrated the first anniversary of their association at a dinner held at The Motel on the Mountain restaurant recently.

Wives and industry friends attended the affair. Al Brill, Spring Valley, arranged the entertainment.

V. Resek honored at Meeting of Wisconsin Oil-Heat Institute

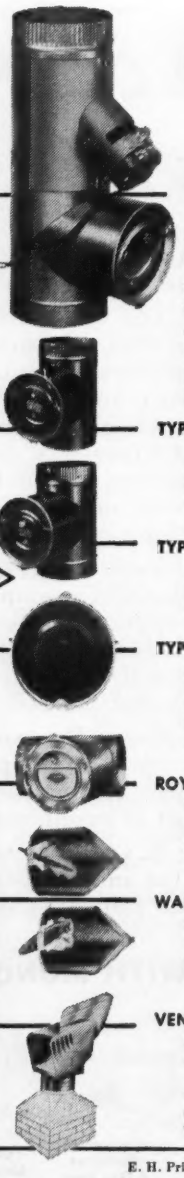
VERNE RESEK, Cleaver-Brooks Co., Milwaukee, and recently-elected president, OHI of America, was guest of honor at the June meeting of the Oil-Heat Institute of Wisconsin, Inc., at the Port Washington Country Club.

1st IN DRAFT CONTROLS for 30 YEARS!

WALKER FUEL-SAVER AUTOMATIC DRAFT REGULATOR

Over 25,000,000 Now in Use for Home and Industry

WALKER MFG. & SALES CORP.
1750 Penn St.
St. Joseph, Missouri



WALKER

Shur-Flo
DRAFT INDUCER

Saves YOU MONEY! Saves TIME! COMBINES 2 DRAFT JOBS IN 1!
Eliminates need for two installations by combining fan operated draft inducer with draft regulator control. Simple to install at any angle.

FAMOUS DRAFT CONTROLS BY WALKER PRECISION ENGINEERED FOR QUALITY

TYPE Z
Dial and Pointer adjustment—simplest design, easiest to adjust, maintains positive and accurate control under widest variation of stack draft.

TYPE 34B
Universally accepted for space heaters, water heaters, trailer stoves, and all budget-priced heating equipment.

TYPE BB
Extra rugged, heavy construction designed for commercial and industrial use. Actual installation proved it cut fuel costs in only three months, enough to more than pay total original investment cost.

ROYAL PURPLE MODEL
Walker's finest quality automatic draft regulator with all moving parts completely shielded from corrosion. Guaranteed performance.

WALKER BBG DOUBLE SWING CONTROL
Walker's BBG Double Swing Control regulates updraft, dissipates downdraft in gas-fired and combination oil-gas fired equipment.

VENTURI TOP FOR CHIMNEY CAPS
Unique Venturi design assures positive elimination of downdraft at chimney top . . for oil, gas or coal fired chimney vents. Patented pivots, balanced construction, guarantee maintenance-free long life.

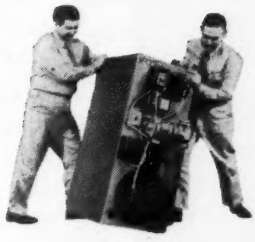
CANADIAN DISTRIBUTORS
G. Mitchell & Co., 4215 Gascon St., Montreal, Quebec, Canada
E. H. Price, Ltd., McArthur St., Winnipeg, Manitoba, Canada
E. H. Price, Ltd., 83 Robson St., Vancouver, B.C., Canada

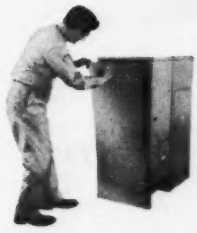
Please rush me information about the Walker items checked below.
☐ Automatic Draft regulators for small installations.
☐ Industrial Draft regulators for schools, buildings, plants.
☐ Double Swing Draft Control for Gas.
☐ Walker SHUR-FLO Draft Inducer.
☐ Royal Purple-Deluxe Controls for Deluxe Equipment.
☐ Venturi-Top Chimney Cap.

NAME_____
ADDRESS_____
CITY_____ STATE_____

and ease of installation . . .

ARCOLEADER

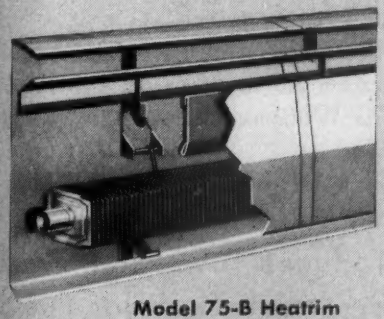




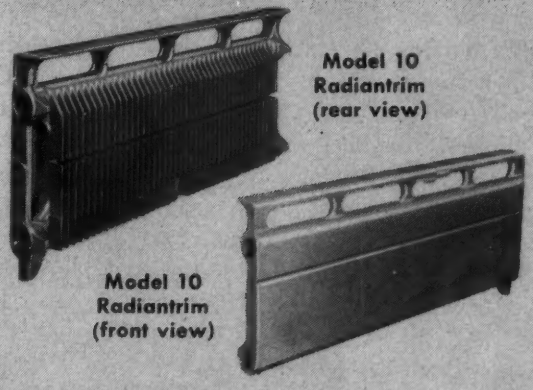
New packaged Arcoleader takes only 12 minutes from crate to connection . . .

HERE is the fastest, simplest cast iron oil heating unit to install. Shipped packaged, it comes with controls, accessories and tankless water heater mounted. It's easily removed from crate and "walked" into place without pipe rollers as a result of new "floating" jacket design. The jacket itself is rugged 20-gauge steel finished in smart, new gray. The Arcoleader has zero clearance in back and on left side. All controls in front for fast, easy maintenance. Arcoleader also is available as boiler-burner unit.

EASY TO INSTALL, MODERN BASEBOARD HEATING PANELS



Model 75-B Heatrim



Model 10 Radiantrim (rear view)

Model 10 Radiantrim (front view)

HEATRIM panels of lightweight but sturdy construction for forced circulation hot water heating. One-piece top and back plus 4′, 5′, 6′ and 8′ stock lengths cut profit-killing waste. Conveniently packaged with enclosure, heating element and one set of joining pieces. Three models available for every type job.

RADIANTRIM cast iron panels for forced hot water or two-pipe steam systems. These handsome new panels are ideal for rooms with high heat loss. Available in 12″, 18″ and 24″ lengths for easy, economical sizing of runs in 6″ increments. Accessories include a regular and a special extended inverted corner cover for filling odd-inch breeches.

SEE your distributor or American-Standard sales representative, or write today for complete information on the new, modern, fast way of installing heating systems. AMERICAN-STANDARD, PLUMBING & HEATING DIVISION, 40 W. 40th Street, New York 18, N. Y.

AMERICAN-Standard

PLUMBING AND HEATING DIVISION

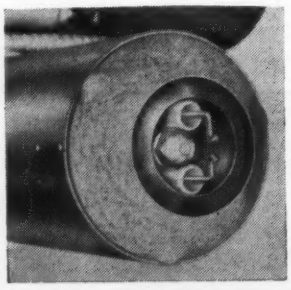
fueloil & oilheat

New Products

Each New Products item has an identifying number. If you want more information on any equipment described here send the coupon on page 126 to FUELOIL & OIL HEAT, *2 West 45 St., New York 36, N. Y., and identify the product by circling its number on the coupon.*

Carlin improves Burners and adds three new, larger Lines

IMPROVEMENTS incorporated in U. S.-Carlin oilburners include "wide-arc" electrodes, shown in photograph. The design plays the spark over a wider area, intended to assure positive ignition even during low voltage periods. Also standard equipment on the burners are counterbored porcelain insulators, with the electrode terminal washer recessed deeply into the porcelain for maximum protection against false ignition.



The three new U. S.-Carlin lines announced are designed for larger homes, public buildings and small commercial establishments. Models 500S-35, 700S-35 and 650, have firing ranges respectively of 3 to 4.5 gph, 3.5 to 7 gph and 3.5 to 6.5 gph. The first two models feature a "Shell head"; model 650 has the standard U. S.-Carlin combustion head.

Made by: The Carlin Co., Wethersfield, Conn.

Circle E1 on coupon, page 126

Combination fill Alarm and tank Gauge made by Oil Equipment Manufacturing

KING COMBINATION is the name of a newly-designed combination fill alarm and tank gauge made by Oil Equipment Manufacturing Corp.

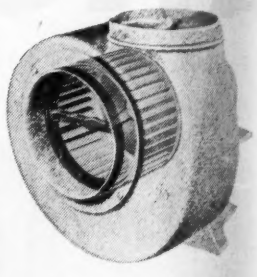
The instrument is corrosive resistant and comes in the following sizes: 2 x 1¼" or 1½ x 1¼". The combination is packaged in individual sleeves and shipped in master cartons of 25 units.

Made by: Oil Equipment Manufacturing Corp., 169 Derby Ave., New Haven 6, Conn.

Circle E2 on coupon, page 126

Chicago "spid" induced draft Fans for boiler Sizes from 5 to 214 Hp

"SPID" INDUCED DRAFT FANS, designed for boilers from 5 to 214 hp, include as standard equipment motor (motor rails, adjustable speed V-belt drive) and shaft cooler, all mounted as an integral unit. Complete assembly handles flue gases at a maximum temperature of 650° F.



Models available include cast-iron direct drive and steel plate V-belt drive models.

Made by: Chicago Blower Corp., 9863 Pacific Ave., Franklin Park, Ill.

Circle E3 on coupon, page 126

Williamson adds Cool-Air Units for Homes with or without Ducts

WILLIAMSON Cool-Air units in 1½ and 1¾ hp capacity can be used in homes with or without existing furnace duct systems. The units have an air-cooled condensing unit. In homes equipped with ducts and a forced-air furnace, the Cool-Air duct and dehumidifying coil is installed in the duct or above the furnace. The duct may service the whole home or only that portion to be airconditioned. The cooling coil is connected to the outdoor condensing unit.

Where no ducts are installed, the fan-coil cooling unit may be installed with its own duct system for the entire home or only a selected area.

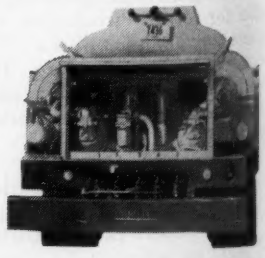
Cool-Air units supplement the Williamson Wethermatic AIRefrigeration line in sizes from 2 to 7½ hp.

Made by: The Williamson Co., 3500 Madison Road, Cincinnati 9, Ohio.

Circle E4 on coupon, page 126

Farrell introduces Town and Country "Platformer" truck Tank for Fueloil

THE NEW FARRELL town and country "Platformer" truck-tank features heavy-duty safety steps, forged steel grab handles, recessed directional signals, oversize rear bumper bolted to the chassis frame to eliminate shock and stress to the tank, plus draw-off lines fully protected from rear-end collision.



Hose reel location allows discharge to either side of the tank, using either reel. All accumulated dirt on the platform can be washed with a water hose at the same time the tank and chassis are washed.

Made by: The Farrell Mfg. Co., Joliet, Ill.

Circle E5 on coupon, page 126

BECAUSE DEPENDABILITY IS A MUST
THE S. S. UNITED STATES USES
TACO CIRCULATORS EXCLUSIVELY*

The world's fastest, most modern luxury liner is the pride of the American merchant fleet. She's fitted out with only the finest products in the world . . . each designed to render that essential dependable performance.

And you can have the same Taco quality circulators with the same Taco dependability on your hot water heating installations that are on the S. S. United States.

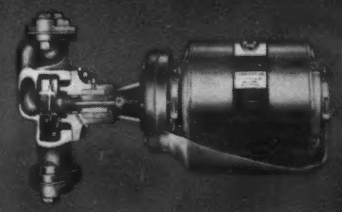
All you need do is specify and buy Taco, because there is *no substitute for TACO quality*. Technical Data Sheets furnished upon request.

**And Taco Heat Exchangers*

TACO HEATERS, INCORPORATED
1160 CRANSTON STREET, CRANSTON 9, R. I.

BETTER HEATING — Taco — BETTER WITH TACO

Corporate Office: 342 Madison Avenue, New York 17, New York
In Canada: Taco Heaters of Canada, Ltd., 4 Gilead Place, Toronto 2



THE POWER-PACKED
TACO CIRCULATOR,
QUALITY BUILT
FOR SMOOTH,
QUIET OPERATION

Bumpa-Tel Signs carry Message on fueloil and service Trucks

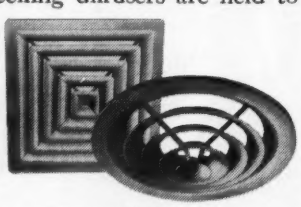
CONSTRUCTED of polished aluminum frame and sheet metal sign panel, Bumpa-Tel signs for cars and trucks come in two sizes: the petite is 40" x 12"; and the regular is 40" x 17". All signs are available with turned edge panel option which allows the use of messages lettered on inserts. Can be ordered unlettered, lettered with enameled letters or lettered on full scotch-lite background.

Made by: Bumpa-Tel Sign Co., Box 181, Mounds, Ill.

Circle E6 on coupon, page 126

Auer's step-down ceiling Diffusers allow fast, economical Installation

DESIGNED for fast, economical installation, Auer's new round and square step-down ceiling diffusers are held to the duct by just four screws. A spring-loaded "balancing bell" damper feature of the diffusers permits easy system balancing in addition to full shut-off without quadrant dampers. Step-down vanes are engineered for the most effective air distribution pattern. Maximum free area with minimum air resistance is provided by straight edge design of vanes. Recirculation of room air is induced by curved contour vane design. Both the round and square styles are available without damper control for efficient use as return air faces on all perimeter systems. Units have a durable baked-on light beige finish and are sealed against the ceiling by thick rubber gaskets.

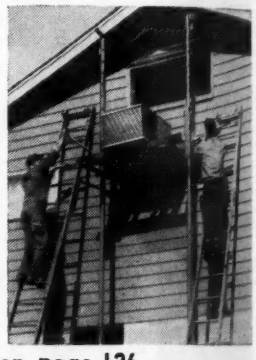


Made by: Auer Register Co., 6600 Clement Ave., Cleveland 5, Ohio.

Circle E7 on coupon, page 126

Hastings' portable outdoor Hoist lifts attic type Airconditioners

A LOW-COST, portable, outdoor hoist for lifting attic type airconditioners is made by Hastings Air Control, Inc. With the "hoist-it" and a simple set of wall brackets, two men can safely raise any size attic unit in about 45 minutes. It can also be used indoors for raising units as heavy as 8,000 lbs. to ceilings as high as 24 ft. Other uses include lifting room units into transoms.



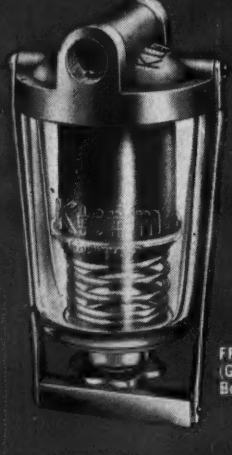
Made by: Hastings Air Control, Omaha 5, Nebr.

Circle E8 on coupon, page 126

the right filter for every use

Klemm FUEL OIL FILTERS

FF-530V (Metal Bowl with Shut-Off Valve)



FF-430G (Glass Bowl)

CHEMISTONE ELEMENT . . . True Filter, not a strainer; exclusive with Klemm.

- MODELS AVAILABLE FOR EVERY HEATING APPLICATION
- CHOICE OF GLASS OR METAL BOWLS
- BUILT-IN SHUT-OFF VALVES AVAILABLE
- EXCLUSIVE CHEMISTONE FILTER ELEMENTS

No matter what kind of an oil burning installation you're selling or servicing, there's a time-proved, customer-satisfying Klemm Fuel Oil Filter to keep it running . . . and running right. That's why it pays to insist on genuine Klemm Filters — "Millions Since 1932."

APPROVED MODELS AVAILABLE

Klemm PRODUCTS

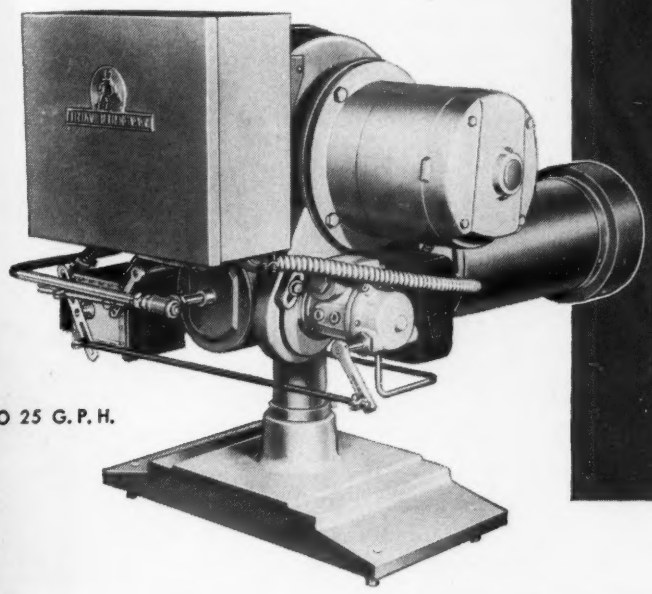
DIVISION OF KLEMM AUTOMOTIVE PRODUCTS COMPANY

1722 North Damen Avenue, Chicago 47, Illinois

EXPORT: Guiterman Co., Inc., New York 4 • CANADA: Elgee, Ltd., Toronto

IRON FIREMAN MicroMist TRADE MARK BURNER

Two-stage atomizing principle reduces heavy oil to a microscopic mist



The first *REALLY NEW* oil burner in thirty years

Burns any fuel oil through heaviest No. 5. With the MicroMist low-pressure atomizing oil burner, heavy oils, through *heavy* No. 5, are reduced to minute particles having the characteristics of a gas rather than a spray. The oil is so finely divided that it becomes an oil mist or fog that will remain in air suspension for several hours. It is easily ignited by an electric spark (does not require gas ignition).

Two-stage atomizer. The heart of the Iron Fireman MicroMist burner is an ingenious supercharger, or compressor. This compressor-atomizer first reduces the oil to an air mixed spray (which is as far as other burners go), then by the heat of compression, to a microscopic air-oil vapor.

Heavy oils can't clog nozzle. The nozzle directs the highly combustible vapor into the firebox. Unlike other oil burners, the nozzle is *not* a critical part, because it has nothing to do with atomization. There are no small passages subject to clogging.

Heating of oil is required only for the heavier grades of No. 5, and then only for starting or pumping.

Look at these additional features. The Iron Fireman MicroMist burner is as easily installed as a conventional gun type burner. It has two important uses: as a conversion burner or as a component part of a packaged boiler-burner unit. No special boiler front or boiler pitting is required. The choice of oil grades is almost unlimited. Integral control panel is wired and tested at the factory. Fuel and maintenance costs are low. It fires low-cost heavy oils with little more attention than a domestic oil burner. Available for low fire start, high-low or modulating firing.

The Iron Fireman MicroMist burner offers an exceptional opportunity to dealers. Mail coupon for more information.

Po'keepsie Motor Hotel provides heat and hot water through winter at a cost of 13 cents per day per room

Mr. Charles Michel, manager, writes:

"Our Iron Fireman MicroMist burner uses an inexpensive, No. 4, oil in our 53-room deluxe motel. From October 1, 1956 to March 1, 1957, our fuel bill for the heating and domestic hot water amounted to $1,233.00, or 13c per room per day.

"This burner has not required daily attention and the overall maintenance cost has been extremely small."

The steam heating system in the Po'keepsie Motor Hotel uses the revolutionary Iron Fireman SelecTemp room heating units with individual room temperature control—"a thermostat in every room." SelecTemp heating is used in conjunction with individual room cooling units.

IRON FIREMAN.

Automatic firing equipment for oil, gas, coal

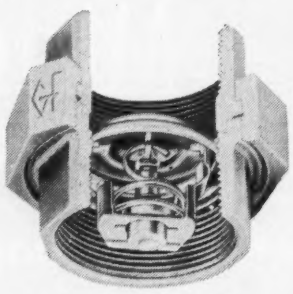
IRON FIREMAN MANUFACTURING COMPANY
3380 W. 106th Street, Cleveland 11, Ohio
(In Canada, 80 Ward Street, Toronto, Ont.)

☐ Please send literature on the Iron Fireman MicroMist burner.
☐ Send information on Iron Fireman dealership.

Name_____
Firm_____
Address_____
City_____ State_____

Thermostatic Union by General Fittings insures uniform hot water Temperature

A THERMOSTATIC UNION, developed by General Fittings Co., stops circulation of boiler water to radiators if boiler temperature drops below 170°F. thus insuring constant hot water. Circulation of adequate temperature boiler water around the tankless heater coils is not interrupted. Installation of a simple by-pass permits flow through radiation until boiler temperature is restored.



Another GF device called the "Perma-Cushion Water Hammer Silencer" eliminates the noise and damaging effects of water hammer in piping.

Made by: General Fittings Co., East Greenwich, R. I.

Circle E9 on coupon, page 126

Weather-Mates to be offered for combination Heating and Cooling

WEATHER-MATES, to be introduced in the fall, will consist of an Embassy convector for heating and a Kelvinator airconditioning unit for cooling. Convector units will be available for one-pipe steam, two-pipe vacuum and hot water systems. The cabinets can be fully-recessed, partially-recessed or free standing; cabinet fronts are removable without tools.

Weather-Mates will be offered on a basis of including the cooling equipment or adding it later. At the time of installation, sleeves and cabinets are put in so that Kelvinator air-cooled units can be attached at the same time or installed at some future date.

Made by: Embassy Steel Products, Inc., 890 Stanley Ave., Brooklyn 8, N. Y.

Circle E10 on coupon, page 126

Wix fueloil Filter equipped with a replaceable, spin-on Cartridge

WIX CORP. has adapted its standard Porosite oil filter for oilburner use. Once installed, filter service requires only removing the old cartridge without using tools and replacing with a new WIX cartridge No. OBC-100—actually, the cartridge is the filter.

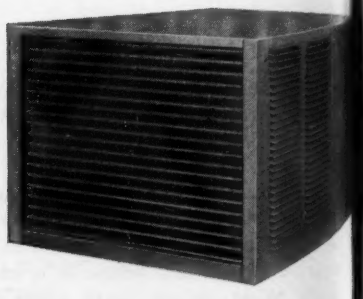
Made of lightweight aluminum the unit consists of a fuel line adapter and the spin-on cartridge. The Porosite filtrant is described as capable of removing micron sized particles and maintaining full 120 gph gravity flow.

Made by: WIX Corp., Gastonia, N. C.

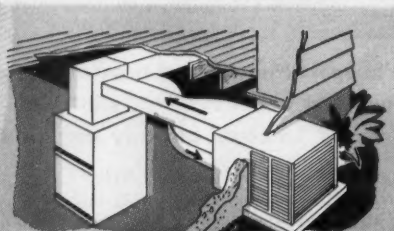
Circle E11 on coupon, page 126

INSTALLS ALMOST ANYWHERE

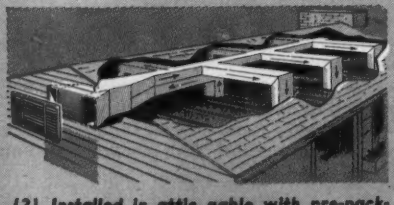
NOW--It's Easier to Sell WHOLE HOUSE COOLING



THE "Coolpak" 2 and 3½ H. P.



(1) In basement window tied-in with existing furnace ducts.



(2) Installed in attic gable with pre-packaged Fiberglas duct system.

(3) Self-contained large area cooling system . . . you simply add a matching cabinet containing return air filter-grill and four-way diffuser.

- **Makes air-conditioning practical not only for homes heated with warm air but even with steam or hot water!**

It's ready to go . . . in hundreds of types of installations throughout your area . . . Century's New "Coolpak"! . . . with full rated cooling capacities of 22,000 and 36,000 BTU/hr. "Coolpak" gives whole-house cooling from out-of-the-way locations in attic, basement, dormer, hall, crawl space or roof. These versatile units may be tied into existing ductwork or installed with packaged, lightweight Fiberglas duct systems.

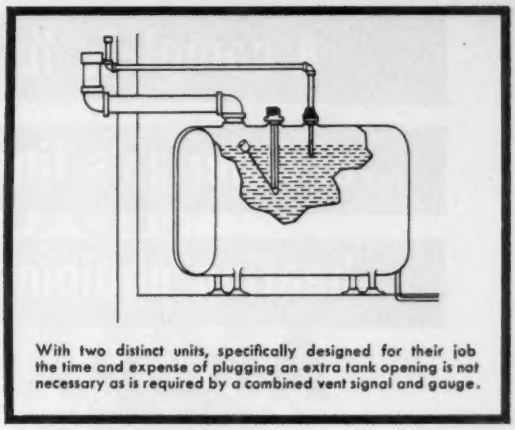
Now you can sell complete air-cooling for less than multiple small-space coolers. Costs less to operate, too . . . controlled by room thermostat. Has special low capacity cooling for mild weather conditions. The cabinet is sound insulated for whisper-quiet performance.

Installation? . . . It's easy! All units are shipped completely assembled and charged. Wiring is simple. Get the facts . . . learn the many other sales advantages of the "Coolpak." Write us today.

YOU CAN COUNT ON CENTURY FOR COMFORT

Century

Dept. 208-D CEDAR RAPIDS, IOWA



With two distinct units, specifically designed for their job the time and expense of plugging an extra tank opening is not necessary as is required by a combined vent signal and gauge.

NOW

the RMC Gauge-Signal Package

gives you the most practical combination

1. "Filtone" SIGNAL

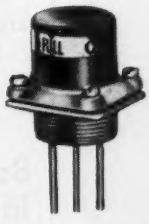
The NEW Filtone is designed to operate with a minimum of back pressure, has no "dead spots" and has far greater strength for supporting the vent pipe. The Filtone offers you both installation and fuel servicing advantages.

FLANGE-TYPE CONNECTOR—Made in two parts which are bolted together to eliminate need for unions, compression-type couplings, or the need to build the vent up from the tank. Has tensile strength one-third greater than malleable iron.

MINIMUM BACK PRESSURE—The RMC Filtone operates with a minimum of back pressure. (1) while tank is being filled and vent is exhausting air only, and (2) when liquid may actually be up to the vent, in case of overfills.

DEPENDABLE, AUDIBLE SIGNAL—Makes a solid, pleasant whistle sound the moment fuel begins to pour into tank. Has no "dead spots" at any rate of fill from 15 gpm to 60 gpm. When the sound stops, the delivery man knows the tank is full.

2. "Universal" GAUGE

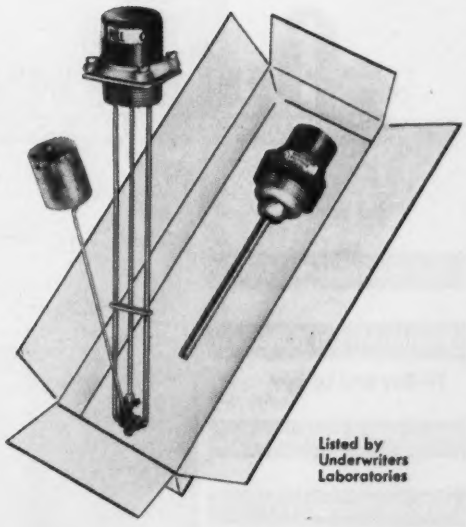


The Rochester Universal Gauge has a long standing reputation as the best value for accuracy and long, lower cost gauge life. Gauge replacement and servicing problems are practically non-existent with Universal Gauge equipped installations.

WEATHER-PROOF—Pressure tight head is sealed and weather-proofed so that it can be used indoors or outdoors.

FUME-PROOF—Magnetic drive eliminates need for any opening into tank; gives perfect readings at all times.

LEAK-PROOF—Hermetically sealed head makes it leak-proof, dust-proof and absolutely shock-proof.



Listed by Underwriters Laboratories

RMC GAUGE-SIGNAL PACKAGE . . . *best combination buy!*

Call your jobber, or write the factory, but whatever you do start using this "perfect package" now. It will save you time, trouble and money!

RMC

ROCHESTER MANUFACTURING CO. • 8 ROCKWOOD STREET • ROCHESTER 10, N. Y.

LIQUID LEVEL, TEMPERATURE and PRESSURE INSTRUMENTS

RMC REPRESENTATIVES

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511 Harper Avenue
Drexel Hill, Penna.

FRANK L. CASSIDY
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Seattle, Washington

CHARLES J. DAVIS
215 Cushman St.
Plainwell, Michigan

WILLIAM J. DEBLER
31 Gordon Rd.
Needham, Mass.

V. E. DUNNING
2949 Harriet Ave. S.
Minneapolis, Minn.

FRANK HACKETT
739 N. Milwaukee St.
Milwaukee 2, Wis.

HALL AGENCIES
4 Manor Road, E.
Toronto, Ont., Canada

CHARLES P. McKENNA, JR.
P.O. Box 155
Richmond 1, Va.

RALPH M. NELSON
412 Marshall Bldg.
Cleveland 13, Ohio

ROCHESTER MFG. CO., INC.
12143 S. Halsted St.
Chicago 28, Ill.

SAMUEL SKNER
274 Madison Avenue
New York 16, N.Y.

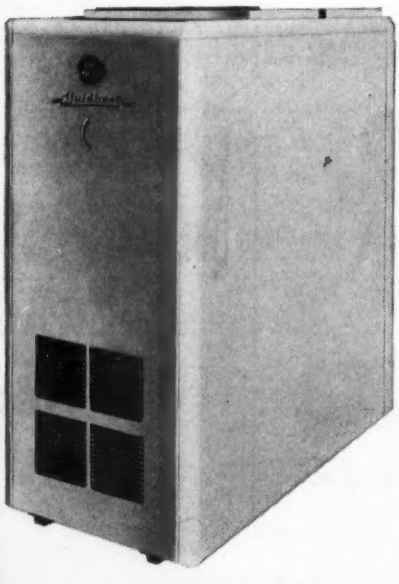
A complete line
of America's finest
heating equipment

QUALITY PRODUCTS
JOHN WOOD
SINCE 1867

fluid heat
AUTOMATIC HEATING EQUIPMENT

The burner makes the difference

Conversion Burners
Winter Air Conditioners
Hi-Boy and Lo-Boy
Horizontal Furnaces
Gravity Furnaces
Counter-Flow Furnaces
Boilers
Hot Water and Steam
Oil-Fired Automatic Water Heaters
120 gal./hr. recovery
PLUS
Rotary Wall Flame Conversion Burners, Furnaces, Boilers
Hot Water and Steam



A broad line of quality equipment for oil and gas firing. Get full details today.

fluid heat HEATING · JOHN WOOD QUALITY PRODUCTS SINCE 1867 · fluid aire COOLING
JOHN WOOD COMPANY
Heater and Tank Division
Conshohocken, Pa. • Chicago, Ill. • Red Oak, Ia.

Kleen Air power suction Cleaner can be Truck or Trailer-mounted

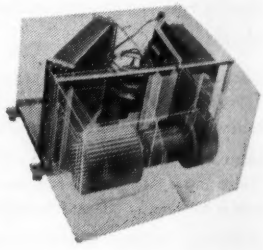
KLEEN AIR power suction cleaner for boiler or furnace vacuuming is offered on a franchise basis only in truck or trailer-mounted models. Designed to handle any size installation, the cleaner can be used for up to 40 homes furnaces without dumping.

Made by: Delamater Distributing Co., Janesville, Wisc.

Circle E12 on coupon, page 126

Fedders' new 3-hp Adaptomatic home Airconditioner is all-in-one Unit

A 3-HP MODEL in the Fedders-Quigan line of Adaptomatic residential central airconditioners is an all-in-one, air-cooled unit which incorporates centrifugal blowers to circulate condenser air under pressure to any location in a house. It features a new split-chassis design that consists of separate refrigeration and blower chassis which bolt together in minutes.



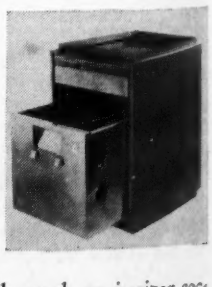
The new unit is designed to fit into any type of home without large wall openings or other structural alterations and supplements the firm's 2-hp model.

Made by: Fedders-Quigan Corp., Maspeth, N. Y.

Circle E13 on coupon, page 126

Borg-Warner electronic air Cleaner low Cost to buy and to install

THE AIRLINE electronic air cleaner recently introduced by Ingersoll Conditioned Air Division, Borg-Warner Corp., is priced at 1/3 to 1/2 the cost of comparable units and is easy to install, requiring only one electrical connection. It may be installed either horizontally or vertically in the cold air return.



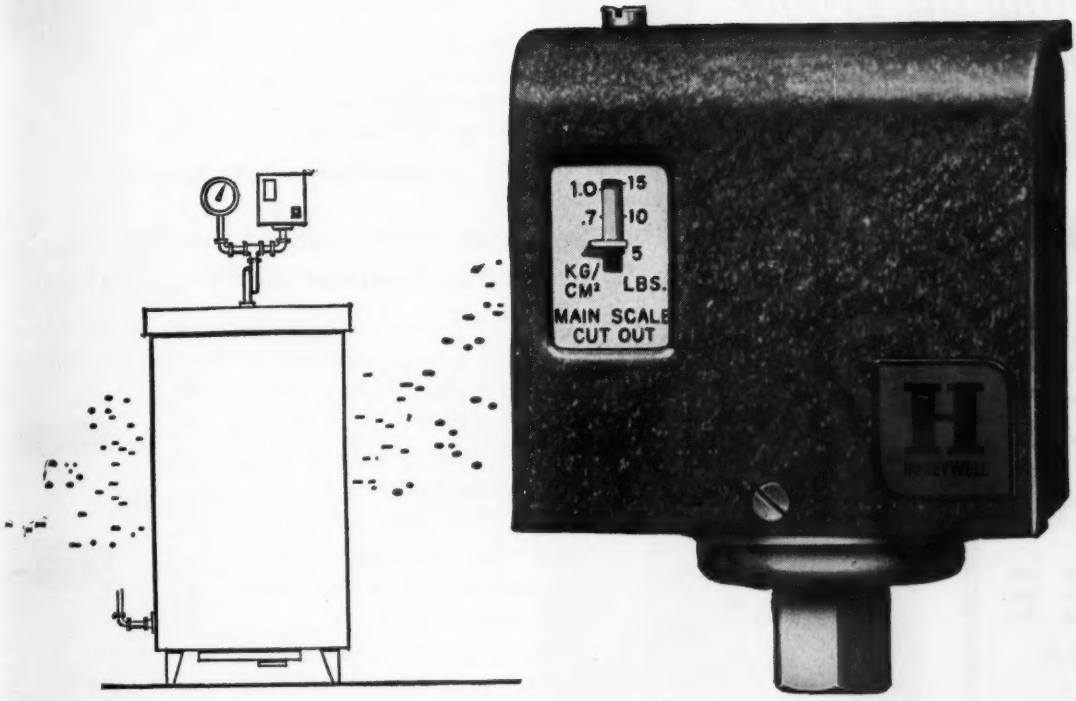
The unit functions on the principle that electrically-charged objects are attracted to each other. Dirt-laden air is passed through an ionizer section, where particles are electrically charged. These particles then pass through a collector section where they are attracted to negatively charged plates. The electronically-cleaned air then circulates through the duct system.

Made by: Ingersoll Conditioned Air Division, Borg-Warner Corp., Kalamazoo, Mich.

Circle E14 on coupon, page 126

Added safety for domestic steam boilers

New Honeywell Pressuretrol*-PA404A



HONEYWELL'S new PA404A is a precision controller, and should be set at a pressure greater than the normal operating pressure of the boiler. Any time the boiler pressure becomes greater than the set pressure, the pressure within the controller increases and actuates its internal switch. This switch breaks the circuit, and stops the burner.

The PA404A is usually mounted on the boiler, alongside the pressure gage. Its dimensions are: 4½" high, 3½" wide, 2½" deep.

• New modern styling • New front cover screw for easy installation and removal • New MICRO SWITCH switch eliminates need for leveling. PA404A can be mounted in any position • New easy-to-read, easy-to-set adjustable differential screw • New switch operation mechanism allows differential adjustments to be subtracted from set point • U.L. approved.

For complete information on Honeywell's new Pressuretrol or on any of Honeywell's complete line of heating controls, call your local Honeywell office. Or write Minneapolis-Honeywell, Dept. FH-8-237, Minneapolis 8, Minnesota.
*Trademark

Honeywell

H First in Controls

In Every Field there's ONE Leader!

in Furnace Cleaning the Leader is the PULLMAN NEVER-CLOG VAC!

• The Pullman gets you in and out of the cellar *fast* because it's guaranteed never to clog under any conditions.

COMPLETE ACCESSORY KIT FREE

With Your Pullman Never-Clog Vac

- 27" metal crevice tool
- Power blower nozzle
- Handy scraper tool
- Flexible metal asbestos packed hose
- 10' x 1½ I.D. heavy duty hose

ACT NOW! MAIL THIS COUPON!

Pullman

THIS IS THE TIME TO CLEAN-UP on those Furnace Cleaning Jobs!

Pullman Vacuum Cleaner Corp. FO-8
25 Buick Street, Boston 15, Mass.

Rush me complete details on the Pullman Never-Clog Vac, so I can make more calls . . . more sales . . . more profits per day.

NAME _____

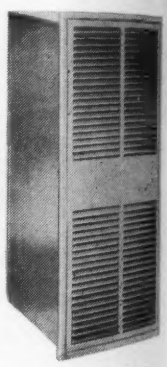
COMPANY _____

ADDRESS _____

CITY _____ STATE _____

Quaker built-in oilfired wall Furnace has 'Distributaire' prefab duct System

DESIGNED for low cost home heating is a built-in oilfired wall furnace made by Quaker Manufacturing Co. Model RH65 has a 65,000 Btu output and can be recessed into the wall or installed in a closet. Forced warm air can be delivered into five or more rooms through ceiling, side wall or back wall registers. Distribution is through the "Distributaire" prefrabricated plenum and duct system. The furnace is available with manual control, or a modulating type thermostat, or a Honeywell round wall thermostat, all factory installed.



Made by: Quaker Manufacturing Co., 1147 Merchandise Mart, Chicago 54, Ill.

Circle E15 on coupon, page 126

Self-contained, water-cooled line of Airconditioners made by Thatcher

A SELF-CONTAINED water-cooled summer airconditioner which can be easily serviced in the field has been added to the Thatcher furnace line. Available in models from 5 through 15 tons, the unit includes both cooling and blower equipment in a single cabinet. The unit can be installed either with ductwork or as a free-standing package unit for commercial applications.

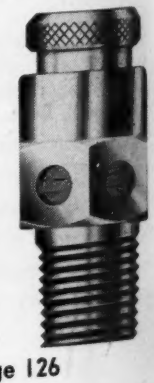
The company also announced a summer airconditioner which can be added to existing warm air systems. It is made in 2, 3, and 5 ton capacities; its small air-cooled condensing unit can be placed in yard, cellar or garage.

Made by: Thatcher Furnace Co., Garwood, N. J.

Circle E16 on coupon, page 126

Taco hot water air Valve is low Cost and automatic

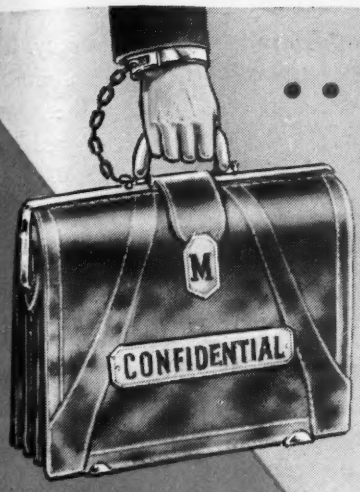
A NEW TACO low cost and automatic hot water air valve incorporates a number of features such as: Hand-operated, non-removable vent screw; controlled water flow; fast cycling; cleanable port and positive shut-off.



Another important feature provides that should the valve become inoperative after several years of use, the cap can be adjusted to provide more space for the fiber discs, allowing the valve to resume automatic operation.

Made by: Taco Heaters, Inc., 1160 Cranston St., Cranston 9, R. I.

Circle E17 on coupon, page 126



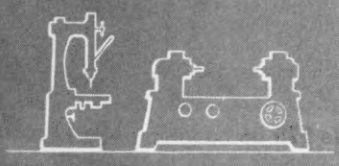
. . the secret of *Monarch* NOZZLE Superiority

Monarch leadership has been maintained for over 30 years by . . .

1. **Working closely with the Industry to meet its progressing needs.**
2. **Constant product improvement through the development of specialized and unique mass production and testing methods and techniques.**

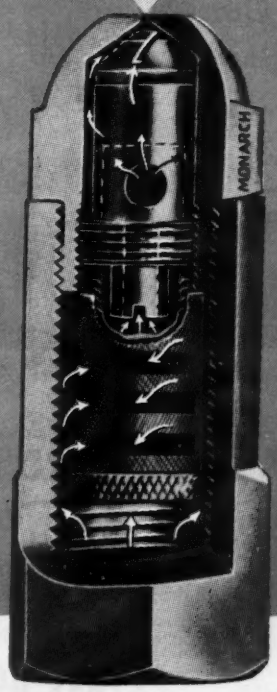
The result: Nozzles unsurpassed in performance, accuracy, uniformity and dependability.

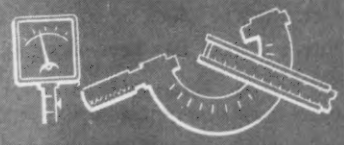
Next time, try *Monarch* Nozzles and see why Service Men and more than 400 Oil Burner and Furnace Manufacturers, world-wide, agree . . . Monarch continues "First Choice of the Industry"!



Precision Machining

Extremely close tolerances and micro-finishes are "musts" in producing accurate, uniform nozzles. Special precision machines designed and manufactured by Monarch permit regular production to tolerances of 1/10,000 of an inch . . . and certain critical dimensions within even closer limits.





Individual Testing

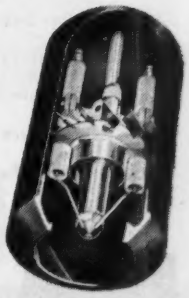
Monarch completely eliminates the need to "try out" several nozzles to find one that fires properly. *Every* Monarch Nozzle is individually tested on *Oil* for Capacity, Spray Angle, Quality of Spray, and Balance! *Individual* testing on *Oil* is your *guarantee* of absolutely uniform performance!

DEALERS: Buy from your Monarch Jobber. Write for Catalog "O"

Monarch AIR MIXING EQUIPMENT

COMBUSTION HEADS:

G-81-C Head is as easy to install as an ordinary Air Cone and Stabilizer. Produces high CO_2 with no "adjustments" to get out of order. For 3⅞" or 4" I. D. Air Tubes.



CONVENTIONAL:

Bladed Cone Rings and four blade Stabilizers for ordinary Air Tube replacement from 3½" to 8" I. D. Also special "Anti-Pulsation" equipment.

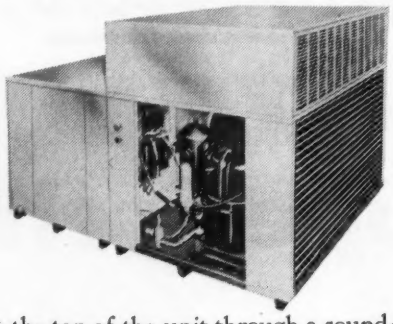
Also available: Flame Mirrors, "24" and "48" Nozzle Boxes, Nozzle Wrenches, etc.

Monarch
MANUFACTURING WORKS, Inc.
2503 E. ONTARIO ST., PHILADELPHIA 34, PA.
Canadian Agent (Except B. C.)
E. S. Gallagher Sales Ltd., Toronto 12, Canada
Exclusive Agents in all of Europe, Australia and New Zealand

REMEMBER: It costs more to clean a nozzle than to replace it with a new, precision, guaranteed-uniform Monarch Nozzle.

Stowaway self-contained Airconditioner introduced in 5-ton Capacity by Lennox

DEVELOPED from the 3-ton Stowaway airconditioners introduced last year, Lennox has announced a new 5-ton air-cooled Stowaway. This self-contained unit consists of two parts—an evaporator and a condenser section. Condenser air is pulled through the condenser coil and exhausted out the top of the unit through a sound-proof discharge hood. The unit may be used with an independent duct system or combined with a forced air heating system.



Made by: Lennox Industries, Inc., Marshalltown, Ia.

Circle E18 on coupon, page 126

Emergency air brake control System made by Power Brake Equipment Co.

TO HELP ELIMINATE truck accidents a new emergency air brake control system has been designed by Power Brake Equipment Co.

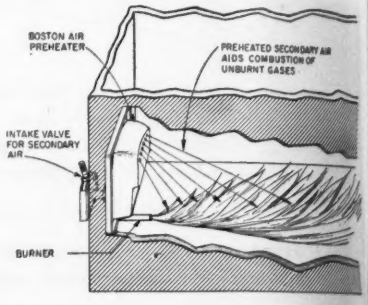
It features a sealed-in air supply that is entirely independent from the vehicle's main air supply. It can be installed so that the brakes will apply in several combinations. The system operates only when the main air supply is lost or lowered to a point below safe pressures.

Made by: Power Brake Equipment Co., Portland, Ore.

Circle E19 on coupon, page 126

Boston Air Preheater usually installed in boiler fire Door is made available

PREHEATER CORP. of America has introduced in the U. S. a unit which is usually installed in the fire door of the boiler to supply preheated secondary air over the fire bed for maximum combustion of fuel. The Boston Air Preheater has two basic sections: an adjustable air intake valve that extends outside the door; and a preheating chamber mounted on the inside of the door. The preheating chamber is heated by radiation that would normally be lost.



Made by: The Preheater Corp. of America, New York, N. Y.

Circle E20 on coupon, page 126

COUNT 'EM!

10 Plus BENEFITS WITH GENERAL FILTERS

We Compared ALL Leading Fuel Oil Filters FEATURE for FEATURE

- All Iron and Steel Construction
- Corrosion-Proofed Inside and Out
- Air Vents On Both Inlet and Outlet
- Choice of Inlet and Outlet Sizes
- Center Bolt Torque Resistance Over 300 In-Lbs.
- Non-Swelling, Leakproof Buna-N Gaskets
- Depth-Type Wool Felt Element
- Patented Lint Removal
- Moisture and Condensation Removal
- Large Sump Area

Only GENERAL HAS ALL 10 KEY FEATURES!

COMPARE! HERE ARE THE FACTS ABOUT FUEL OIL FILTERS!

Comparison of GENERAL FUEL OIL FILTERS with other leading Makes

KEY FEATURES	GENERAL FILTERS 16-25A & 26-25BB	FILTER "A"	FILTER "B"	FILTER "C"	FILTER "D"	FILTER "E"	FILTER "F"
ALL IRON AND STEEL CONSTRUCTION	YES	NO	NO	YES	NO	NO	NO
CORROSION-PROOFED INSIDE AND OUTSIDE	YES	NO	YES	NO	NO	NO	NO
AIR VENTS ON BOTH INLET AND OUTLET	YES	NO	NO	NO	YES	NO	NO
CHOICE OF INLET AND OUTLET SIZES	YES	NO	NO	YES	NO	NO	NO
CENTER BOLT TORQUE RESISTANCE OVER 300 IN-LBS.	YES	YES	NO	YES	NO	YES	NO
NON-SWELLING, LEAKPROOF BUNA-N GASKETS	YES	NO	NO	NO	NO	NO	NO
DEPTH-TYPE WOOL FELT ELEMENT	YES	YES	NO	NO	YES	NO	NO
PATENTED LINT REMOVAL	YES	NO	NO	NO	NO	NO	NO
MOISTURE AND CONDENSATION REMOVAL	YES	YES	NO	NO	YES	NO	NO
LARGE SUMP AREA	YES	YES	NO	NO	YES	YES	NO
TOTAL KEY FEATURES	10	4	1	3	4	2	0

GENERAL FUEL OIL FILTERS OFFER MORE KEY FEATURES! MORE BURNER PROTECTION MORE CUSTOMER SATISFACTION

MORE OIL BURNER PROTECTION...
MORE SATISFIED CUSTOMERS!
GENERAL FILTERS, INC.

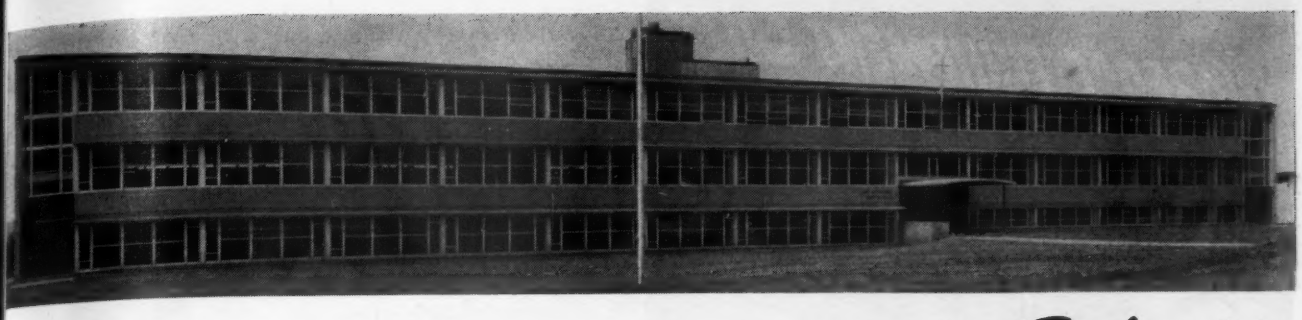
IN CANADA: Canadian General Filters, Ltd., 39 Crockford Blvd.

SELL THESE ITEMS, TOO!

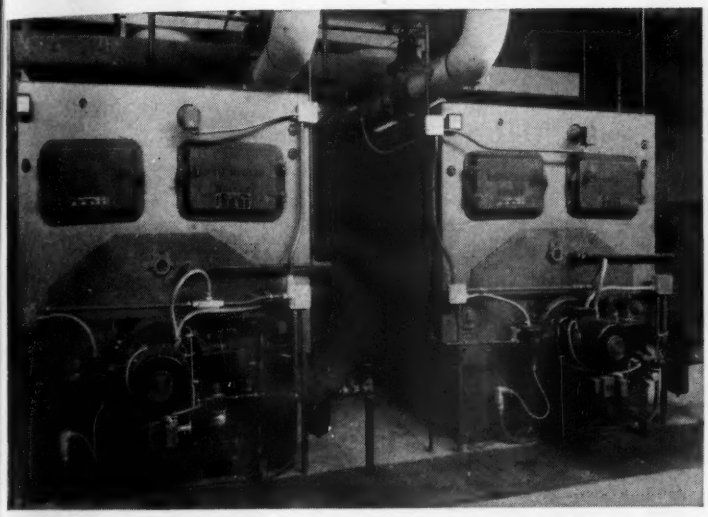
CLEAN RIGHT Soot Remover destroys 1/8" soot layer in 2-5 minutes. Can reduce heating costs 25%.

GENERAL HUMIDIFIER

Water Flow Regulator obsoletes floats . . . nothing like it!



The boiler that best meets every *School Requirement*



Installation of Weil-McLain "HR" Boilers equipped with rotary oil burners in St. Mathews High School, Philadelphia, Pa.

Why the WEIL-McLAIN "HR" BOILER MOST EFFICIENTLY BURNS HEAVY OILS

The "HR" Boiler was designed in cooperation with leading manufacturers of horizontal rotary oil burners. The features below show why it provides the most favorable burning conditions and efficiently absorbs the intense heat of rotary burner flames.

1. Large firebox volume develops better combustion conditions and maximum radiant heat transmission.
2. Curved primary heating surface extends from crown sheet, greatly increasing area directly above the fire.
3. Balanced gas travel through the flueways assures equal distribution of heat to all secondary heating surfaces.
4. Generous waterways permit rapid, efficient water circulation through boiler.
5. Large steam space assures rapid generation of dry steam.
6. Rugged cast iron construction for durability and trouble-free operation.
7. Individual short draw rods simplify assembly and contribute to longer boiler life.
8. Special steel front plate and section simplify installation of rotary burner.
9. High base makes more combustion space available—eliminates high brick foundation.

Here's why the Weil-McLain "HR" Series Cast Iron Boiler for horizontal rotary oil burners is the ideal selection for schools...*or any other large installation!*

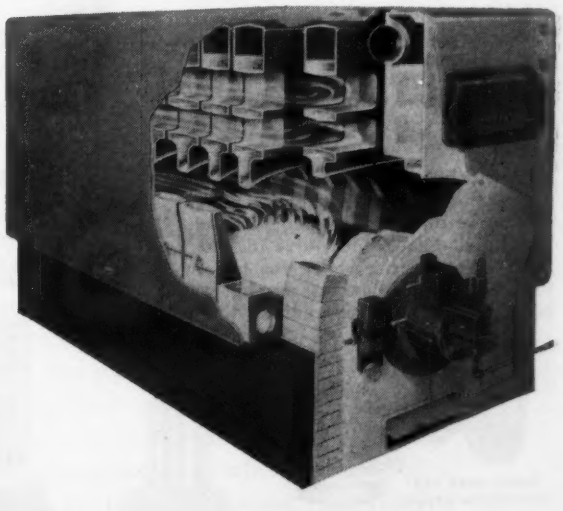
Low operating cost. Designed specifically to fully develop the heating economy obtainable with low-cost heavy oils.

Saves in construction cost. The "HR" can be installed in a smaller boiler room—no space needed for pulling boiler tubes—less head room required.

Permits future building expansion. Extra capacity can be provided by adding sections. "HR" sections pass through an ordinary door.

Inexpensive maintenance. Easily cleaned for top efficiency. Repairs in general are minor because cast iron boilers are immune to usual causes of breakdown.

Longer lived. Cast iron is more resistant to corrosive effects of flue gas. The tough outer skin of "HR" Boiler sections is left on to protect against rusting—no face grinding.



WEIL-McLAIN
BOILERS · RADIATORS

WEIL-McLAIN

"HR" SERIES BOILERS

FOR HORIZONTAL ROTARY OIL BURNERS

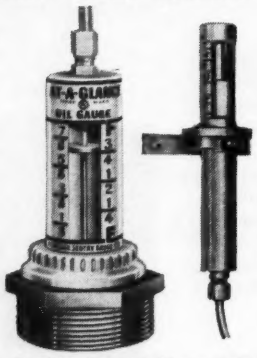
WEIL-McLAIN COMPANY • Dept. B-87 • Michigan City, Indiana

INCREASE EQUIPMENT SALES
...cut down delivery costs
Sentry ODF* Tank Gauge tells drivers what they want to know
at point of delivery!
"THAT LITTLE SENTRY GAUGE SURE SAVES US BOTH A LOT OF TROUBLE!"
TELLS WHEN OIL IS NEEDED
*Oil Dealer's Friend
... HOW MUCH IS NEEDED
... WHEN TO STOP FILLING
STOP FILLING
Sentry "ODF" remote reading gauge

ONLY *Sentry* OFFERS SUCH A COMPLETE LINE OF DIRECT AND REMOTE READING TANK GAUGES

Above is SENTRY'S newest — The ODF At-A-Glance tank gauge that's setting new records in building sales and customer goodwill. Located outside of building at fill pipe, this easy-to-read weather-proof gauge shows the exact oil level in the indoor tank. Saves costly time consuming trips to basement, unnecessary hose unreeling and eliminates over-flow. Permits delivery without disturbing customer.

Other constant-register SENTRY gauges include combination tank and remote reading, barrel gauges, direct reading, and gauges for stove and space heater tank. Write today for full information about these fast moving business getters. Advertising aids available.


Combination At-A-Glance tank and remote reading gauges

Sentry stove and space heater gauges

Sentry At-A-Glance barrel gauges

Sentry At-A-Glance tank gauge

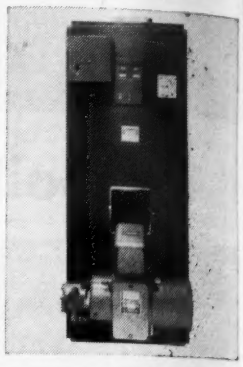
Sentry superior quality Therma-Gauge

On guard— 24 hours a day

KRUEGER *Sentry* GAUGES
GREEN BAY • WISCONSIN

Quiet Automatic Burner announces cast iron wet base Boiler with Burner

A CAST-IRON wet base boiler with cast-iron oilburner has been announced by Quiet Automatic. Available either as a factory packaged unit or as a boiler-burner unit for hot water heating, the QUIK HEAT unit can be readily taken apart for modernization jobs. Controls are conveniently located in the front of the boiler. Series 13 is made in four sizes with IBR ratings from 525 sq. ft. to 875 sq. ft.



Made by: Quiet Automatic Burner Corp., Newark, N. J.

Circle E21 on coupon, page 126

Airtemp restyles 5 hp condensing Unit for greater Compactness, Versatility

RESTYLING of Airtemp's 5-hp air-cooled condensing unit, now designated Airtemp Model 1205-1, has resulted in a unit more compact in size and more versatile in application. Height of the unit has been reduced from 35″ to 32-5/16″; width, from 58″ to 36⅝″; weight, from 895 to 845 lbs.

Application-wise, the 5-hp condensing unit has been engineered and designed for use with a wide series of matching fan-coil, evaporator coil or blower units produced by Airtemp. Internally, condenser coils are located one on each side of the unit instead of at the back as in the earlier model. Unit voltage may be either 220—3 phase (standard), 208—3 phase or 230 single phase.

Made by: Airtemp Division, Chrysler Corp., 1600 Webster St., Dayton 1, Ohio.

Circle E22 on coupon, page 126

Devcon's emergency repair Kit contains plastic Steel for on-the-spot Mending

DEVCON CORP. is making an emergency repair kit for on-the-spot repairs of tanks, pipes, pumps and valves. The kit contains plastic steel, a combination of 80% steel and 20% plastic, plus a special hardening agent. Also in the package is a supply of specially-treated glass tape for large holes or corroded areas and in places where extremely high strength is necessary.

Made by: Devcon Corp., Danvers, Mass.

Circle E23 on coupon, page 126

picture yourself...a Gulf Solar Heat Dealer

As a Gulf Solar Heat Brand Dealer you constantly display a nationally recognized brand emblem on your premises and rolling equipment—wherever opportunity and good taste permit. The Gulf Truck Painting and Dealer Identification Program enables independent dealers to conveniently take advantage of this extra sales-building feature *at no personal cost.* This sound and flexible program is designed to provide the dealer with the utmost in promotion value by combining local prestige with the national acceptance of the Gulf brand name. In truck painting, "top billing" is given to the dealer name *in all cases.* Whereas trucks are painted with Gulf colors and product insignia, dealer identity is kept foremost. The goodwill and reputation-building value of smart-looking, well-identified equipment accounts for past and present enthusiastic dealer participation in this program. With each truck serving as a "Solar Heat billboard on wheels," the dealer's opportunity for doing a bigger, more profitable business (particularly with new residents) is greatly enhanced.

Gulf Truck Painting and Identification is but *one of many* aids made available to heating oil dealers through a progressive marketing program that's tops in the industry! *For complete details covering the marketing program for Solar Heat Brand Dealers, contact your nearest Gulf Sales Office.*

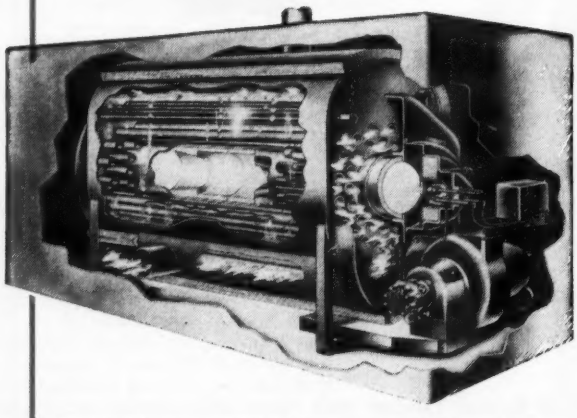
GULF
SOLAR HEAT
heating oil

GULF OIL CORPORATION

fueloil & oilheat

WHY

IT'S EASY TO SELL THE BETHLEHEM DYNATHERM



→ EXCEEDS CUSTOMERS' EXPECTATIONS — gives them more for their money in fuel economy, convenience and comfort than they have ever known before, regardless of what heating system was used!

→ FUEL SAVINGS OF MORE THAN 40% ARE COMMON — one reason why it pays for itself in 5 years!

→ ALL THE DOMESTIC HOT WATER YOUR CUSTOMERS NEED — the year 'round, at the lowest possible cost!

This is the Year . . . to sell The Bethlehem DYNATHERM to replace the many heating systems now antiquated . . . that are costing the home owners real money!

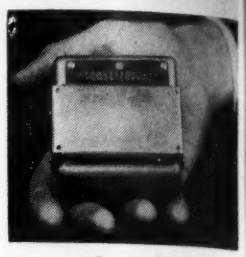
Why not get started now selling this outstanding Package Unit—and get your share of this profitable "replacement" business! Wire or write immediately for full information!

BETHLEHEM FOUNDRY & MACHINE COMPANY

BETHLEHEM, PENNSYLVANIA, U.S.A.

GE has transistorized power Supply for Use with two-way radio Systems

A NEW TRANSISTORIZED power supply has been designed by General Electric to provide greater reliability in two-way radio communication equipment. This unit replaces the receiver portion of the mobile power supply and has a life expectancy equal to that of an entire mobile combination.

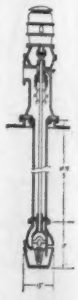


Made by: General Electric Communication Products Department, Syracuse, N. Y.

Circle E24 on coupon, page 126

Granco submerged rotary Pumps answer to suction Problems

A NEW LINE of submerged rotary pumps being manufactured by Granberg Corp. to operate on the patented Granberg universal-joint principle of rotary positive displacement design to alleviate the problem of priming and to be especially useful in such installations as bulk plants where suction problems exist.



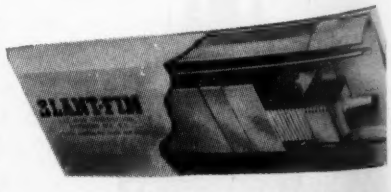
The new Granco submerged pump is available in a ready-to-install package unit with discharge column and driving head integral with the pump. Suction assembly can be lowered into a manhole of 15" I.D. in either shallow or deep tanks, as additional sections are available in multiples of 5-foot lengths. The pump is driven through a vertical steel shaft within the discharge column and powered by an explosion-proof electric motor, coupled with integral gear reduction as required. Models are available in capacities up to 300 gpm.

Made by: Granberg Corp., 1308 67th St., Oakland 8, Calif.

Circle E25 on coupon, page 126

Slant-Fin baseboard Package permits easier installation, high Btu Output

AVAILABLE as a complete package, a new ¾" baseboard radiator includes heating element, snap-on cover assembly, support brackets, adjustable vane dampers, track expansion clip hangers and splice plate. The packages contain units in 4, 5, 6 and 8 foot sizes to eliminate on-the-job cutting. Heating element's copper tubing is ¾" diameter. Aluminum fins utilize "slant-fin" principle for more heating surface per linear foot.



Made by: Slant-Fin Radiator Corp., 87-49—130th St., Richmond Hill 18, N. Y.

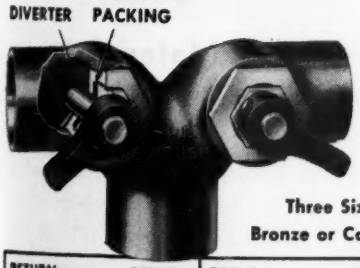
Circle E26 on coupon, page 126

Its Amazing!

GREATEST LABOR SAVER IN YEARS

THRUSH *Twin-L* BALANCER

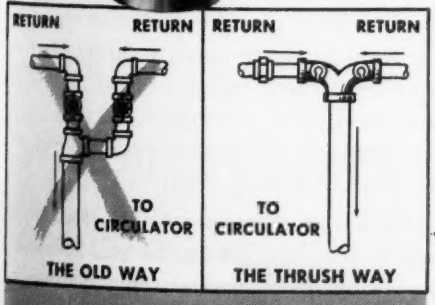
WON TRADE ACCEPTANCE OVERNIGHT . . . IMPROVES HOT WATER HEAT • INCREASES YOUR PROFIT



Three Sizes, Bronze or Cast Iron

TWIN-L BALANCER serves such a useful, practical purpose and saves so much money, time and material that it has found immediate acceptance with the trade.

Whether you do five jobs a year or five hundred, Thrush Twin-L Balancer will reduce the cost of your installations and at the same time make a neater, easier-to-balance Hot Water Heating System. Correct balancing means higher operating efficiency. It's another Thrush labor saver that also means improved heating and more profit for you. *Ask your wholesaler about it today or mail the coupon for bulletin and prices.*



ONE FITTING TAKES THE PLACE OF TEN

SAVES TIME, MATERIAL • LABOR

H. A. THRUSH & COMPANY
Department C-8, Peru, Indiana

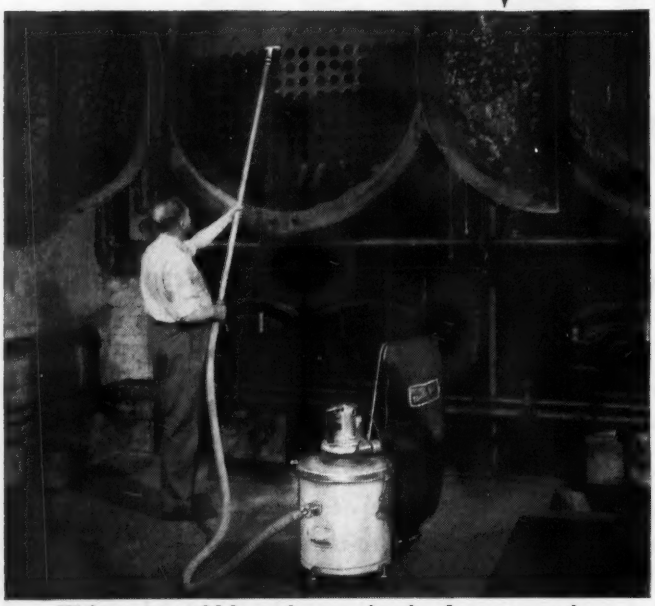
☐ Please tell us more about Thrush Twin-L Balancer to simplify hot water heating installation. Send bulletin and prices. Also send Condensed Catalog.

NAME _____

ADDRESS _____

CITY _____ STATE _____

every furnace, boiler, and air conditioning cleaning problem answered by PREMIER



This man could have been using inadequate equipment, but he's not. His boss knows that PREMIER'S *complete line* of vacuums and tools is designed to satisfy the needs of any cleaning operation efficiently and economically.

Why not let PREMIER *help you in your job? Send for* **free** *details today!*

Gordon L. Bowman, General Sales Manager
The PREMIER Company, Dept. 504
755 Woodlawn Ave., St. Paul 1, Minnesota • MIdway 9-7002
35 Gerrard St. West, Toronto 2, Canada

Please rush me *free* details on PREMIER furnace, boiler, and air conditioning cleaning equipment and FREE information on how I can cut maintenance costs by choosing the right machine for *my* job!

Name_____

Address_____

City_____ State_____

Hagan Chemicals corrosion Inhibitor for closed circulating water Systems

CORROSION INHIBITOR CS is a non-chromate product designed to treat closed circulating water systems including airconditioning, low pressure hot water boilers, ice melting and heat pump systems.

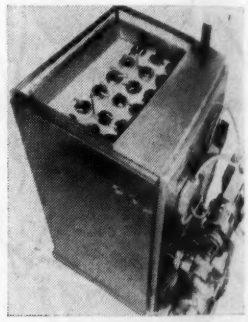
The inhibitor is described as protecting steel, copper, brass, aluminum and solder. Available in granular form in 100 and 20-lb. drums, the compound is compatible with antifreeze and protects during standby since it is not susceptible to oxygen in leakage.

Made by: Hagan Chemicals & Controls, Inc., Hagan Blvd., Pittsburgh 30, Pa.

Circle E27 on coupon, page 126

Easy Accessibility main Feature of New Yorker's Uni Pac Boiler

EASY accessibility is a major feature of New Yorker Steel Boiler's new Uni Pic boiler permitting the thorough cleaning and servicing of the unit in a matter of minutes. The unit comes completely assembled and wired on a skid, protected by a heavy shipping container. ASME constructed and stamped, it is guaranteed for five years. Installations are quick and easy.



Made by: New Yorker Steel Boiler Co., Inc., Colmar, Penna.

Circle E28 on coupon, page 126

Basaltwool, new fibrous Material for acoustic and heat Insulation

BASALTWOOL, a new fibrous material made in Sweden from Basalt volcanic rock and now available in the United States through Thermo-Sound Products, is said to possess remarkable acoustic and heat insulating properties. Fibres of Basaltwool are approximately 20 microns in diameter and 18 to 36 inches long. The long fibre length permits use of Basaltwool in mat form without use of a binder. The material will not burn nor support combustion and tests have shown that it will withstand temperatures up to 1700° F. for short periods without breaking down.

For thermal insulation, it is comparable to other fibre insulating materials in K factor, but can be used in installations subjected to much higher temperatures. Because it is an inorganic material, it will not rot, decay, or induce corrosion in adjacent metal surface. Basaltwool batts are available in densities from 3 to 6 pounds per cubic foot, and in appropriate widths and thicknesses.

Available from: Thermo-Sound Products, Division of Kittell-Lacy, Inc., 10816 East Fawcett Ave., El Monte, Calif.

Circle E29 on coupon, page 126

Mr. Oilburner Serviceman

For some time now we, as nozzle manufacturers, have been convinced that cleaning nozzles which have been in service past the warranty period is a losing proposition. Even with all of our facilities for doing this job, we find it less expensive to supply new ones.

here's why . . .

Baked on carbon and varnish cannot be properly removed except by lengthy cleaning and inspection process. The time required to properly clean a nozzle in terms of labor cost greatly exceeds the cost of a new nozzle. This is why nozzle manufacturers cannot maintain a nozzle rework department.

however . . .

A new nozzle (in service three weeks or less) can often be successfully cleaned by blowing them out with filtered compressed air. In this case lint or dirt particles may have lodged in the distributor slots causing lopsided fires, streaky sprays or even complete plugging. If so, carefully remove the foreign matter and try it again. If this doesn't correct the fire, return it to the manufacturer for replacement under warranty. Remember, nozzles with baked on varnish or carbon cannot be cleaned economically.

ACTUAL CALLS ON DEALERS HAVE SHOWN US . . .

Basic call cost for a serviceman is $4.18 per hour.
Basic call cost plus $1.00 for a new nozzle is $5.18.
Basic call cost plus 15 minutes to clean and replace a nozzle is $5.22.
Basic call cost plus 15 minutes to clean and replace a nozzle plus one call back in every ten calls due to improper cleaning is $5.65.
In other words, you lose 47c every time YOU TRY TO CLEAN a nozzle.

From your customer's viewpoint, a new part is always more desirable than an old one, so by replacing the nozzle you not only build customer good will, but you save your company money in the bargain!

America's Leading Nozzle Manufacturers

HAGO PRODUCTS
1120 Globe Avenue
Mountainside, New Jersey

MONARCH MANUFACTURING WORKS, INC.
2501 E. Ontario Street
Philadelphia 34, Pennsylvania

WILLIAM STEINEN MFG. CO.
43 Bruen Street
Newark 5, New Jersey

BOSTON MACHINE WORKS
11 Willow Street
Lynn, Massachusetts

DELAVAN MANUFACTURING COMPANY
West Des Moines, Iowa

EDDINGTON METAL SPECIALTY COMPANY
Eddington, Pennsylvania

completely PACKAGED

ZONE CONTROL!

GOLD CROWN BOILER with EXTENDED JACKET

GROSS OUTPUT — 100,000 BTUH AND UP

FEATURING—

- From 1 to 6 PRE-WIRED Zone Control Motorized Valves
- High output and efficiency
- All Copper Tankless Hot Water Heating Coil
- Easy-to-carry crate with safety carrying handles — complete package only 380 lbs.
- Simplified installation
- Complies with ASME Code
- All components completely assembled and pre-wired
- Compact design in minimum floor space

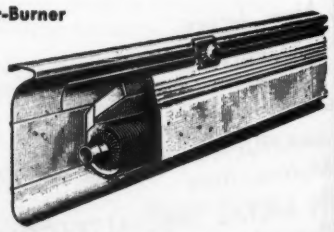
COMPLETE PACKAGE INCLUDES:

Boiler
Burner
Combustion Chamber
Insulation
Jacket (Flush or Extended)
All Copper Tankless Coil
Circulator
Theraltimeter
Thermostat
Pressure Relief Valve
Stack Control
Triple Acting Thermostat
Flow Control Valve
Flow Regulator

ZONE CONTROL VALVES

Get on the band-wagon now

ask your supplier about the new SPI-ROL-FIN Boiler-Burner with SPI-ROL-FIN Zone Control valves which when combined with SPI-ROL-FIN'S Baseboard Radiation will make your next installation



— Easier • Faster • More profitable to you

Write, wire or phone for complete information

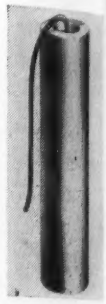
SPI-ROL-FIN CORPORATION

133 GREENWOOD AVENUE • PEQUANNOCK, NEW JERSEY

Telephone: TERHUNE 5-3352

Smoke Candle made by Schiller Mfg. traces Leaks, ventilation Patterns

LEAKS can be found quickly with the Schiller smoke candle which also is efficient in tracing circulation in air ducts and ventilation patterns. Available with yellow or white smoke, in one, two and three minute sizes. The smoke leaves a harmless stain which can be washed off around the leak. Equipped with long fuses, the candles can be dropped without danger; they can't break, nor can they ignite from spontaneous combustion. They are non-toxic in large areas.

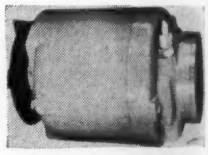


Made by: Schiller Manufacturing Co., 409 E. Jefferson, Detroit 26, Mich.

Circle E30 on coupon, page 126

Tuthill "Powermite" combines Pump, Motor, Blower in space 8½" x 4¾"

TUTHILL'S Powermite pump and motor combination, developed to meet the needs of original equipment manufacturers with unusual space limitations, combines in a space measuring only 8½" x 4¾" a positive displacement internal gear rotary pump, a driving motor and a cooling blower. A single shaft serves all units.



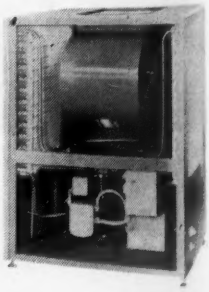
Powermite can be furnished, in large production runs only, in a wide variety of pump and motor combinations. Model illustrated has a capacity of 18 gph at 300 psi, is driven by a 1/12 hp motor at a speed of 1750 rpm, and is supplied with a cooling blower.

Made by: Tuthill Pump Co., 939 East 95th St., Chicago 19, Ill.

Circle E31 on coupon, page 126

U. S. Airconditioning Corp. announces residential, commercial air cooled Line

THE KOOLER AIRE waterless system has been developed by United States Air Conditioning with condensers in sizes 2, 3, 5 and 7½ hp. Newly designed to require a minimum of ground space.



Condensing unit has two condenser coils and two air inlets to permit a larger face area. Air discharge is vertical to the top of the unit. Units are factory-assembled, tested and pre-charged with a refrigerant.

Made by: United States Air Conditioning Corp., 7900 Tabor Rd., Philadelphia, Pa.

Circle E32 on coupon, page 126

NEW & NEW & EQUAL NEWS

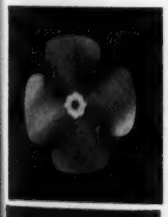
It's the *new* Torrington line of Vari-Basic blower units for central heating and air conditioning equipment, now in production at all three Torrington plants. And here is why this important product development is *news*.

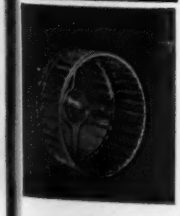
1. New quality: Engineering features include the famous Center-Lock Airotor wheel design . . . permanently lubricated bearings, with 3-point suspension . . . and spot-welded heavy steel construction, superbly finished.

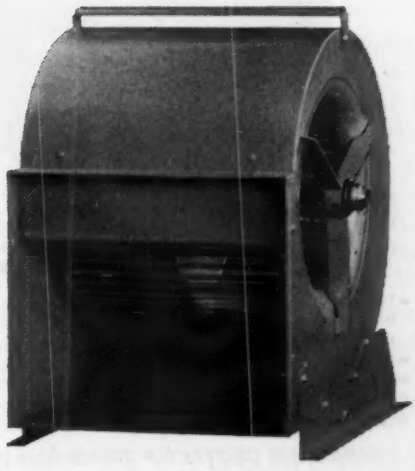
2. New flexibility: The units are designed for interchangeability with existing standard equipment, and Torrington's marketing policy makes these components available singly or in combination.

3. New versatility: These units are available in a wide range of sizes designed to provide maximum variability to meet directional-flow requirements.

Your inquiries are invited. For full information, *talk to Torrington!*







THE TORRINGTON MANUFACTURING COMPANY

TORRINGTON, CONNECTICUT • VAN NUYS, CALIFORNIA • OAKVILLE, ONTARIO

PELCO FUEL & BURNER CORPORATION
PROOF
Until we began using the Blue Heat additive we had been bothered with clogged up nozzles on certain makes of burners which we are servicing. Blue Heat has eliminated this problem.
Blue Heat has dispelled the offensive fuel oil odor caused at our loading racks. Before using Blue Heat the odor of the fuel oil was quite obvious throughout our terminal, now the same is not noticeable at all.
As you can see by our letterhead we are featuring Blue Heat in our fuel oil.
I believe that your additive will increase our fuel oil sales considerably during the coming heating season.

HIGH-TEST PREMIUM
BLUE HEAT
FUEL OIL ADDITIVE

builds
Fuel Oil Business

Write today for a franchise in your area

PARKE-HILL CHEMICAL CORP.
29B Bertel Ave. • Mount Vernon, N. Y. • MOunt Vernon 8-7220

More for your Money in
MORYSVILLE

Morysville U-2 for ½, ¾ or 1 ton chassis

BEST BODY - BEST BUY

- 14 and 16 ga. Body Steel (14 ga. throughout for models rated 1 ton up—19 ga. doors)
- 12 ga. Diamond Floor Plate
- Heavy U-Channel Understructure
- Electric Welded throughout
- Telescoping Roof and Hinged Gate
- Full-length Hinges with Brass Pins
- Solidly Framed Doors and Panels
- Recessed, Spring-loaded Latches with Individual Locks or Master Locking Device
- Fendix Undercoating (No Extra Charge)

IMMEDIATE DELIVERY • Distributors in Principal Cities

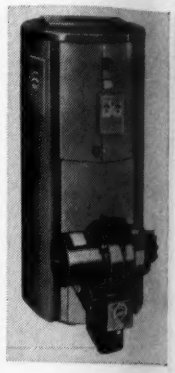
"BODIES YOU CAN DEPEND ON" TO LAST INDEFINITELY

MORYSVILLE Body Works INC.

813 SOUTH READING AVE. BOYERTOWN, PENNA.

Federal Series of vertical, oilfired Boiler-burners have new jacket Design

FEDERAL'S FVW SERIES of vertical, oilfired boiler-burner units are available in three styles—flush jacket, extended jacket and packaged (FPK). New jacket design of the flush and extended styles permits jacket installation after all piping has been completed.



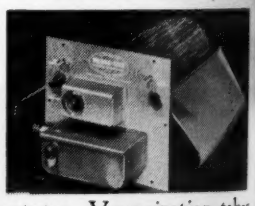
Matching burner, if desired, is shipped completely assembled and requires only insertion into boiler. Burner is available in flange or pedestal mounting styles. Standard equipment for domestic hot water supply are 200 gph tankless coils. Larger size coils are available as optional equipment. Available in five sizes with net output of 74,000 Btu/hr to 149,000 Btu/hr.

Made by: Federal Boiler Co., Inc., Midland Park, N. J.

Circle E33 on coupon, page 126

Hudee'Aire humidity control System introduced by Walter E. Selck & Co.

AN INEXPENSIVE humidifier to be installed in the plenum of forced air furnaces is called Hudee'aire humidity control system. A screen cylinder made of non-corroding phosphorus bronze rotates as it is driven by a small motor. Water is lifted by the screen cylinder and as furnace blower fan goes on, water wheel rotates. Vaporization takes place as air currents pass through the screen cylinder.

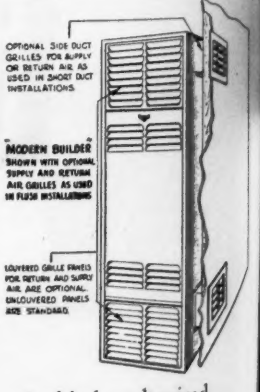


Made by: Walter E. Selck and Co., Chicago, Ill.

Circle E34 on coupon, page 126

Versatile heating-cooling Unit is made by Stewart-Warner Corp.

THE "MODERN BUILDER" is a single heating-cooling unit that utilizes the same casing, blower, warm air and return air ducts for both heating and cooling. The line is available in counterflow and vertical models. Heating capacities range to 67,000 Btu input with two and three hp cooling capacities. A built-in plenum chamber is left vacant when installed as a heating unit only; and the cooling coil may be inserted at anytime without changing the original installation. Shipped assembled and wired.


OPTIONAL SIDE DUCT GRILLES FOR SUPPLY OR RETURN AIR AS USED IN SHORT DUCT INSTALLATIONS.
MODERN BUILDER SHOWN WITH OPTIONAL SUPPLY AND RETURN AIR GRILLES AS USED IN FLUSH INSTALLATIONS
LOUVERED GRILLE PANELS FOR RETURN AND SUPPLY AIR ARE OPTIONAL. UNLOUVERED PANELS ARE STANDARD.

Made by: Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago 14, Ill.

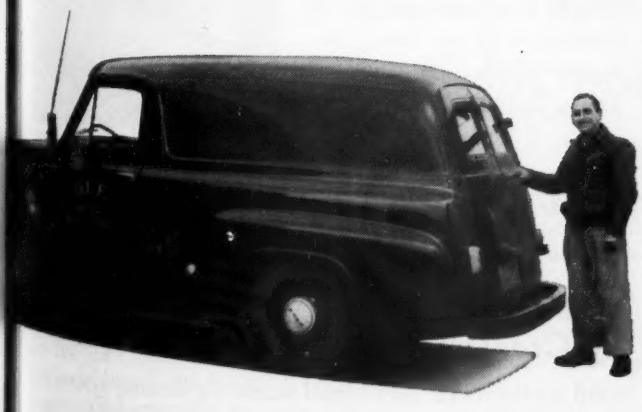
Circle E35 on coupon, page 126

Typical bulk plant at Flemington, N. J., has four Red Seal ticket-printing meters. High accuracy helps GLF's 66 plants stay well within the industry-standard ½% overall loss factor.

Meter-printed tickets help preserve fine relationship of trust between driver and patron. The 1500-gal. trucks have two 1½" meters.

GLF's 120,000,000 Gallons a Year

Metered TWICE through 600 Red Seals



Three service trucks, manned by skilled meter specialists, carry spare parts for all of GLF's 600 Red Seals. The parts inventory is amazingly small and easy to manage. Each truck carries a 50-gal. test can. The company also has a trailer-mounted 500-gal. prover.

For 225 tank trucks and 66 bulk plants serving 70,000 farm patrons in New York, New Jersey and Pennsylvania, the Petroleum Div. of Cooperative G.L.F. Exchange, Inc., has standardized on Neptune Red Seal Meters.

What were the deciding factors? GLF officials studied their own meter records. They asked their servicemen . . . the men who test and repair the meters. Everywhere was evidence that Red Seal meters stay accurate with the least fuss and bother . . . and the lowest overall expense.

Founded in 1920, GLF entered the petroleum business in 1936. All products are filtered twice and metered three times . . . at terminals, bulk plants and trucks. Meter-printed tickets keep track of every gallon.

This is just one more case history of the savings you too can make with Red Seal's sustained accuracy and low maintenance. Ask the Neptune jobber in your area for details.

NEPTUNE METER COMPANY
19 WEST 50TH STREET • NEW YORK 20, N. Y.

neptune

Branch Offices: ATLANTA • BOSTON • CHICAGO • DALLAS • DENVER • NO. KANSAS CITY, MO.
LOS ANGELES • LOUISVILLE • PORTLAND, ORE. • SAN FRANCISCO (Millbrae)
In Canada: Neptune Meters Ltd. • 1430 Lakeshore Rd. • Toronto 14, Ont.

4 TYPES
HI-RECOVERY®
(4 BATHS PLUS)
OIL-FIRED
HI-RECOVERY
QUIET AUTOMATIC
OIL FIRED WATER HEATER
HOT WATER HEATERS
• GLASS LINED
30 gallon with 120 gallon hour recovery
• COPPER LINED
30 gallon with 120 gallon hour recovery
45 gallon with 180 gallon hour recovery
• A.S.M.E. GALVANIZED
30 gallon—35 gallon—and 44 gallon for Motels, Apts., State and Government Jobs
• TWIN COIL JOBS
for Launderettes and Big Buildings
COAST TO COAST DISTRIBUTOR
QUIET AUTOMATIC BURNER CORP.
MANUFACTURING ENGINEERS
33-35 Bloomfield Avenue • Newark 4, N. J.
CHICAGO OFFICE: 1005 W. Belmont Ave. EAstgate 2-6684

FEATHER-WEIGHT ACTION—
— a breath of air moves the vane
The Steinen Draft Regulator will respond to the slightest movement of air because the minimum frictional area of the hinges rotating on two heavy duty, corrosion resistant bearing pins creates a non-clog, non-binding bearing surface that is extremely sensitive.

TRADE MARK
STEINEN
ESTABLISHED 1907
Steinen Draft Regulators now sold in all popular sizes
WM. STEINEN MFG. CO.
43 Bruen St., Newark 5, N. J.

Single package Delco cooling Units added to existing heating Systems

A LINE of single package Delco cooling Conditionaires has been designed for use as separate cooling systems or for addition to homeowners' present heating plant. Available in two sizes, 2 hp and 3½ hp, the units are completely air-cooled and can be installed in gables, hip roofs, crawl space or basements.

Made by: General Motors—Delco Appliance Division, Rochester, N. Y.

Circle E36 on coupon, page 126

American Air Filter Co. manufactures Filter to fit any window Airconditioner

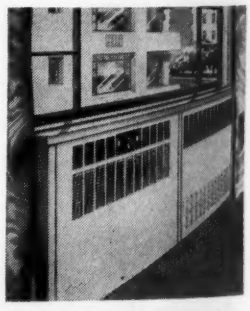
A FILTER that fits any size and any make window airconditioner is being made by American Air Filter Co., Inc. The AMER-Glas filter is composed of a rigid mat, 15 x 24" made of continuous strands of green glass fibers that are interwoven, bonded and compressed. This material can easily cut with scissors, snips or sharp knife to the size needed and can be placed in any window unit. No filter frame is needed.

Made by: American Air Filter Co., Inc., Louisville 8, Ky.

Circle E37 on coupon, page 126

I. W. Air Conditioning Corp. Unit for all types convector Heating

"IN-WALL" is a self-contained conditioner designed to blend with any type of convector heating unit. Made by I. W. Air Conditioning Corp., the unit is good for apartment, hotel, motel and private home application. It can be installed in both new and old structures and can be serviced without being removed from its housing sleeve. The units are available in ¾, 1 and 1½ ton sizes and are equipped with a separate exhaust motor and fan.



Made by: I. W. Air Conditioning Corp., New York.

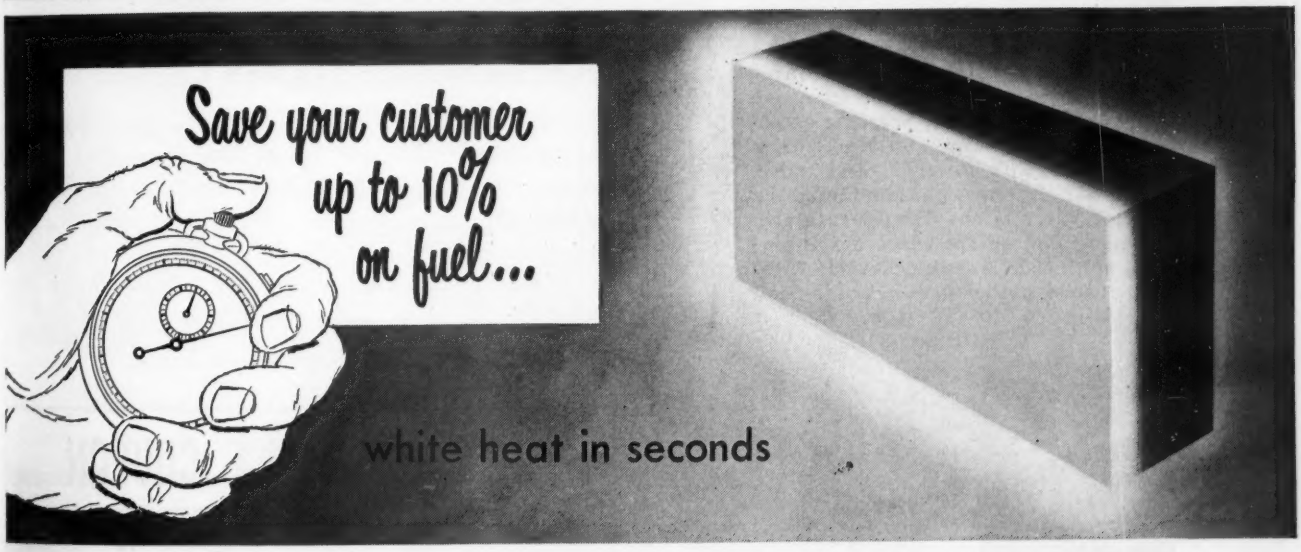
Circle E38 on coupon, page 126

Cronco Mist-Master Humidifier made by Cronstroms Manufacturing, Inc.

EASILY INSTALLED into forced warm air heating systems is a new humidifier made by Cronstroms Manufacturing, Inc. Called the Cronco Mist-Master, the humidifier has no moving parts and is installed by tapping into the plenum. Stale dry air is drawn through the intake to the humidifier chamber where a fine mist is absorbed by the dry air. Operates on one and one-half gallons of water per hour.

Made by: Cronstroms Manufacturing, Inc., 4225 Hiawatha Ave., Minneapolis 6, Minn.

Circle E39 on coupon, page 126



Stopwatch shows how J-M insulating fire brick *helps you do both!*

Seconds to cut! Seconds to heat! Any wonder Johns-Manville insulating fire brick are so widely used everywhere for oil burner firebox construction!

Save time and labor

J-M insulating fire brick save you time on the job! Quickly, easily cut with a hacksaw, they make it easy to build fireboxes to the exact size and shape manufacturers recommend for top efficiency.

Assure customer satisfaction

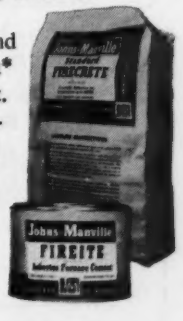
J-M insulating fire brick save your customers as much as 10¢ on every fuel dollar! Here's why:

Heavy, ordinary fire brick soak up heat, take longer to reach operating temperature. Lightweight J-M insulating fire brick eliminate this fuel waste! Within seconds after the burner goes on—they heat to white-hot intensity. Customers also appreciate the noticeable reduction in soot, smoke and odor made possible by higher combustion chamber temperatures. And they welcome the sound-deadening qualities of J-M insulating fire brick which reduce operating noise. Recommended insulating fire brick for domestic oil burner fireboxes: JM-20, JM-23, JM-26. For industrial use: JM-28 and JM-3000.

For information, see your nearest authorized Johns-Manville Distributor. Or write Johns-Manville, Box 14, New York 16, N.Y. In Canada, 565 Lakeshore Road East, Port Credit, Ontario.

For sealing against gas and air leaks, use J-M FIREITE* Asbestos Furnace Cement. For lining hearths of rotary burners, use J-M STANDARD FIRECRETE* —a hydraulic setting refractory—ready for use in 24 hours.

*Reg. U. S. Pat. Off.



JOHNS-MANVILLE JM PRODUCTS

Johns-Manville INSULATING FIRE BRICK

FOR "SKIN-HEAT-IN-SECONDS" IN FIREBOXES

Buckeye's ① ② punch ends slow, messy fuel oil delivery

1 This balanced type valve controls fuel flow at all pressures — opens effortlessly, closes without chatter. Its compact design delivers high capacity for faster delivery. The Buckeye No. 9361 valve construction eliminates "liquid pockets" after the valve has been closed, reducing excessive dripping. The No. 9361 is also available with internal check valve. Constructed of lightweight aluminum, the No. 9361 valve is easy to operate and maintain. The entire valve assembly, guard, and inside seal is removable without the use of special tools or equipment. Available in 1¼" to 1½" sizes.

2 The Buckeye No. 8702F swivel, with exclusive "O" ring seal and nylon bearings, extends the service life of fuel oil hose. No more kinks, twist, or damaging tensions on hose. The Buckeye swivel allows the hose and valve to turn independently. Manufactured for 1¼" and 1½" sizes.

Complete details are available in the new Buckeye Catalog.
For your FREE copy write:

BUCKEYE IRON & BRASS WORKS, Dept. F
Box 883, Dayton, Ohio

Send me Buckeye's Free catalog for details on the No. 9361 Valve and the No. 8702F swivel.

NAME_____

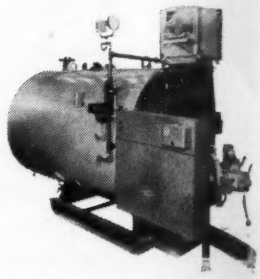
ADDRESS_____

CITY_____ STATE_____

BUCKEYE IRON & BRASS WORKS, Dayton, Ohio
Valves and Fittings for The Oil Industry

Federal's FM series Scotch Marine Boilers designed for easy Assembly

FEDERAL BOILER'S newly-introduced FM series Scotch Marine Steel boiler package is of the induced draft type, designed for easy on the job assembly. The sub-assembled package is shipped with matching burner, completely prewired control panel, draft inducer, all necessary operating controls, and lifting hooks and skids for easier rigging and installation.



It is available for use with either No. 5 or No. 6 oil.
Made by: Federal Boiler Co., Midland Park, N. J.

Circle E40 on coupon below

Fedders-Quigan 1 hp airconditioner runs on regular 115 volt Current

RATED AT 9,000 Btu's, Model 712S is a 1 hp, 7½ ampere airconditioner designed by Fedders-Quigan to run on regular 115-volt current. This eliminates the need for wiring alterations in homes covered by the National Electrical Code.

Made by: Fedders-Quigan Corp., 58-01 Grand Ave., Maspeth, N. Y.

Circle E41 on coupon below

READER SERVICE COUPON

FUELOIL & OIL HEAT READER SERVICE
2 West 45th St., New York 36
REPLY CARD AUGUST ISSUE
Mail Now—Coupon Expires October 31, 1957

Circle numbers of new product items on which you want more information:

NEW PRODUCTS

E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
E11	E12	E13	E14	E15	E16	E17	E18	E19	E20
E21	E22	E23	E24	E25	E26	E27	E28	E29	E30
E31	E32	E33	E34	E35	E36	E37	E38	E39	E40
E41									

ADVERTISEMENTS—Give page number and name of advertiser about whose products you want more information.

Page ..... Advertiser .....

Your Name .....

Company ..... **Position** .....

Street .....

City .....

Check Classification of principal dollar volume:
☐ Fuelall Dealer ☐ Parts and Equipment Jobber ☐ Manufacturer
☐ Manufacturer Employee ☐ Manufacturers Rep. ☐ Oilheating Dealer ☐ Other

How Underwood helps master fuel oil paperwork

Underwood's *fuel oil accounting* machine automatically schedules future deliveries at the same time you post customer accounts. A unique Underwood "memory system" computes and prints the degree day of the next delivery for each account.

Fuel oil dealers, as well as customers, are protected. The machine balances and proves the accuracy of each account . . . saves time by keeping records *always up* to date . . . gets statements out on schedule. One Underwood user, *Nassau Oil Company of Princeton, New Jersey,* posts 3000 items in only six hours at the season's peak.

Your office personnel will like Underwood's 10-key touch operation. It's easy to learn . . . simple to use. Call Underwood for a demonstration . . . if you want complete mastery of fuel oil paperwork.

UNDERWOOD CORPORATION, ONE PARK AVENUE, NEW YORK 16, N.Y.

the underwood sundstrand

FUEL-OIL DEALER MACHINE

fueloil & oilheat

Letters

GIFFORDS OIL CO., INC.
Elmont, N. Y.

Editor:

I have found a low cost simplified way of draining hot water heating expansion tanks which I want to pass on to the trade.

I started out months ago to find a way where the homeowner need only open the drain valve without having also to unscrew venting plugs and manipulate other gadgets, to drain his expansion tank. Fortunately, I discovered after a great deal of research that a very low cost ¾" globe valve did the trick.

The name and number of this valve is: ¾"-Fig. 102-B-Globe Stops-Stuffing Box, Cleveland Brass Mfg. Co., Cleveland, O. Assembly directions are as follows: Screw ¾" by ½" bushing into inlet side of globe valve followed by ½" nipple to go into the expansion tank. Screw ¾" close nipple into outlet side of globe valve.

Remove present drain valve, discard it and replace with the ¾" Cleveland globe valve.

I found that the Cleveland valve drained a completely filled fifteen gal. expansion tank in 20 minutes compared with 37 minutes for a standard drain valve.

I found that this particular valve did the trick due to the fact that the water surface tension across the ½" valve seat opening is not strong enough to permit atmospheric pressure to hold the water trapped in the expansion tank. The homeowner can now drain his own expansion tank safely without making a call for service.

HARRY GIFFORDS

WILLARD G. MEYERS
Advertising Agency
Philadelphia

Editor:

I see by your (July issue) that you are 35 years old. Well, congratulations!

I seem to have been associated with you in one way or another for almost 25 of those 35 years since you first called on me in the New York Central Building around 1933, when the Bethlehem Foundry & Machine Co. whose advertising I handled had bought the Oil-Electric Company of Minneapolis and were wondering what to do with the impossibly named Doe oilburner.

My first brilliant idea was a 2 page insert with return post card, designed to be used in both OIL HEAT and FUELOIL JOURNAL.

We got excellent results from both papers.

That Bethlehem experience was fascinating. We did everything—redesigned the conversion unit— completely designed a boiler-burner unit, built by Fitzgibbons, advertised in New York newspapers, held dealer meetings, handled local Bethlehem sales—had a wonderful time.

Then Bethlehem management changed, I resigned and later met Ray Whipple and had an equally interesting experiences with him and Walter Harvey. This included being marooned in the Harvey-Whipple factory during the floods of 1936.

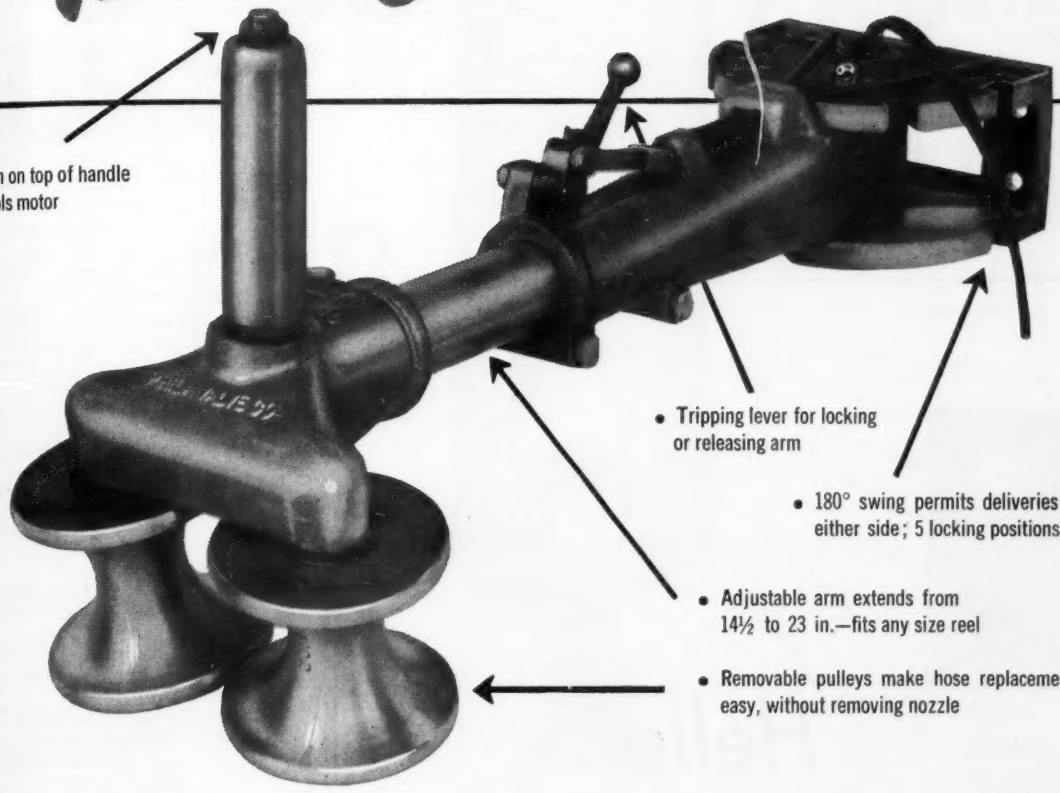
WILLARD G. MEYERS

From the laboratories of Commercial Filters Corporation comes the new Honeycomb Filter Tube — at a new low price. Designed especially for today's oils, the new Honeycomb Filter Tube assures trouble-free filtering efficiency. Produced by new methods of automation, it is available at a substantial price reduction. Look for the *new* green Honeycomb Filter Tube in the *new* green wrapper at the *new* low price. You'll be dollars ahead.

Micro-Fine Filtration for Low Cost Clarity

COMMERCIAL FILTERS CORPORATION
MELROSE 76, MASSACHUSETTS
Plants in Melrose, Massachusetts and Lebanon, Indiana

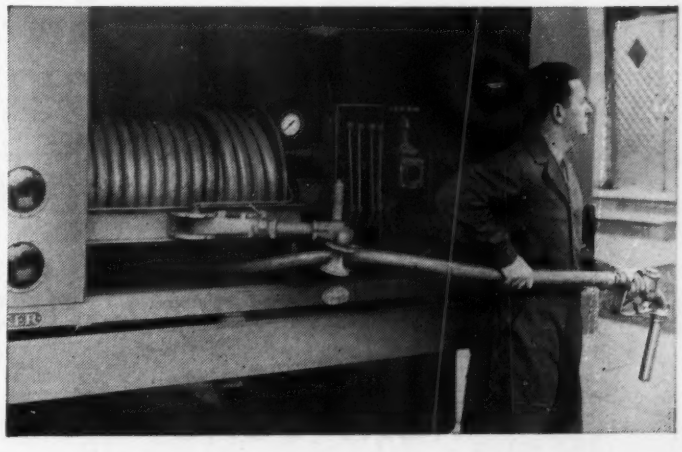
Best FOR YOUR NEEDS


• Button on top of handle controls motor
• Tripping lever for locking or releasing arm
• 180° swing permits deliveries from either side; 5 locking positions
• Adjustable arm extends from 14½ to 23 in.—fits any size reel
• Removable pulleys make hose replacement easy, without removing nozzle

Fully adjustable hose guide cuts delivery time, lengthens hose life

More deliveries per hour! Less wear and tear on hose! Guided unwinding and level rewinding! You get all these —on new or old trucks—with the Philadelphia Valve hose guide! Ball-bearing rollers can be removed to permit replacement of hose and the symmetrical rollers can be inverted to double the life of the flange. Arm swings out of the way when traveling, locks in any one of five positions when in use. Adjustable arm length permits its use on any size reel, guides hose around corners of truck. Unit weighs only 14½ lb., withstands a 500-lb. pull.

Rugged construction means long life that virtually assures freedom from replacement costs. Control wires are fully enclosed to prevent cutting by hose. Write to us or your distributor for full details.



PHILADELPHIA VALVE COMPANY

ARAMINGO AVENUE AND EAST TIOGA STREET, PHILADELPHIA 34, PA.

DISTRIBUTORS

NORTHEASTERN PETROLEUM SERVICE & SUPPLY, INC., 37 BROOKLEY ROAD, JAMAICA PLAIN 30, MASS. • OIL MARKETING EQUIPMENT COMPANY, 325 FREMONT STREET, SAN FRANCISCO 5, CALIF. • HOWARD SUPPLY COMPANY, 5125 SANTA FE AVENUE, LOS ANGELES 11, CALIF.

Calendar of Coming Events

AUGUST

18–23—National Congress of Petroleum Retailers, 11th annual session, Sheraton Gibson Hotel, Cincinnati, Ohio.

30–31—Desk and Derrick Clubs of North America 6th annual convention, Chicago, Ill.

SEPTEMBER

5– 6—API Oil Information Committee meeting, Broadmoor Hotel, Colorado Springs, Colorado.

11–13—National Petroleum Assn. 55th annual meeting, Traymore Hotel, Atlantic City, N. J.

13–14—Michigan Petroleum Assn., Hotel Grand, Mackinac Island, Mich.

18–19—Ohio Petroleum Marketers Assn., fall conference, Commodore Perry Hotel, Toledo, Ohio.

22–24—Pennsylvania Petroleum Assn., annual meeting, Pocono Manor Inn, Pocono Manor, Pa.

22–25—American Institute of Wholesale Plumbing & Heating Supply Assns., Waldorf-Astoria Hotel, New York, N. Y.

OCTOBER

6–10—ASTM—Committee D-2 meeting, Sheraton-Park Hotel, Washington, D. C.

13–16—American Petroleum Credit Assn., 33rd annual conference, Mark Hopkins Hotel, San Francisco.

13–16—Empire State Petroleum Assn., Lake Placid Club, Lake Placid, N. Y.

13–19—Oil Progress Week.

16–17—South Dakota Independent Oil Men's Assn., convention, Alonzo Ward Hotel, Aberdeen, South Dakota.

16–20—API Division of Marketing, Marketing Research Committee meeting, Camelback Inn, Phoenix, Arizona.

17—Virginia Petroleum Jobbers Assn., Hotel Roanoke, Roanoke, Va.

17—West Virginia Petroleum Assn., annual meeting, Daniel Boone Hotel, Charleston, W. Va.

17–19—Tennessee Oil Men's Assn., annual meeting, Peabody Hotel, Memphis, Tenn.

20–22—National Assn. of Oil Equipment Jobbers annual convention and trade show, Hotel Peabody, Memphis, Tenn.

20–23—North Carolina Oil Jobbers Assn. annual meeting, The Grove Park, Asheville, North Carolina.

24—Plumbing & Heating Industries Bureau, Annual Meeting, Palmer House, Chicago, Ill.

NOVEMBER

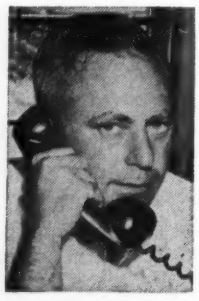
11–14—API 37th annual meeting, Conrad Hilton Hotel & Palmer House, Chicago, Ill.

11–14—API Marketing Division annual meeting, Congress Hotel, Chicago, Ill.

16–16—Air-Conditioning and Rrefrigeration Wholesalers annual meeting, Sheraton Hotel, Chicago, Ill.

18–21—Air-conditioning and Refrigeration Industry 10th Exposition, International Amphitheater, Chicago, Ill.

18–22—National Warm Air Heating and Air Conditioning Assn., annual convention and committee meetings, Hotel Morrison, Chicago, Ill.



Hello!

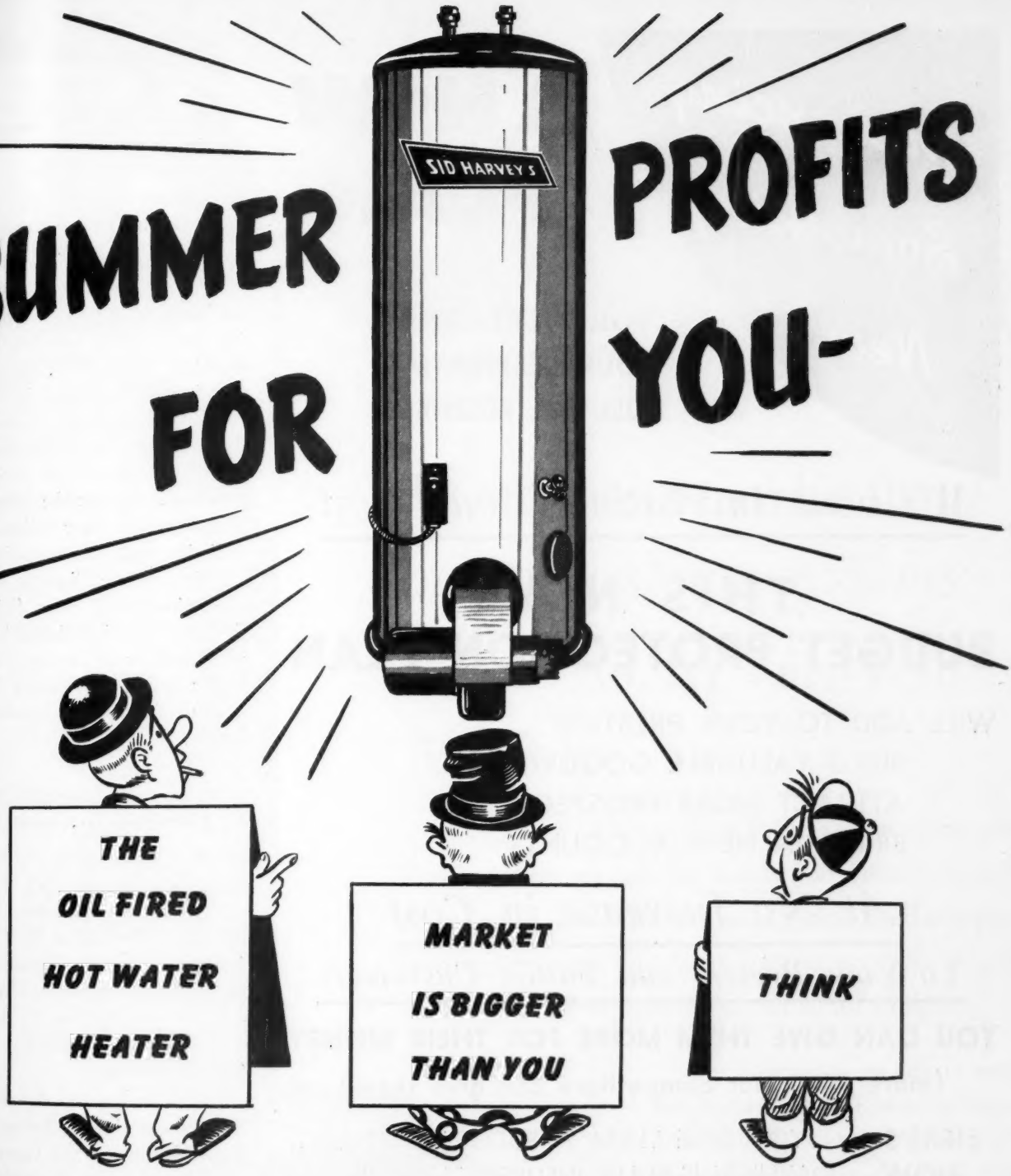
There's a big, important event coming in the oilheating industry next June!

—G.M.M.

❖

Albert E. Bastedo, age 69, died suddenly on July 11 at his Hastings-on-Hudson, N. Y., home. He was senior vice-president and treasurer, Burnham Corp., Irvington, N. Y., and also was manager of the company's Boiler Div. Starting as a junior clerk in 1906, Bastedo had been a company employee for 51 years and at the time of his death was a director of the corporation. He was active in the formation in 1919 of the Burnham Boiler Corp. and acted as its first manager. Prominent for years in the heating field, Bastedo was a member of the ASHAE, was a member of the executive committee, Institute of Boiler and Radiator Manufacturers for a number of years and served as its president during 1945 and 1946.

SUMMER PROFITS FOR YOU-



The Replacement Market is the BIG market for water heaters.

YOUR CUSTOMERS are buying other water heaters because they don't know that you can supply what they want.

The Harvey heats 30 gallons of hot water in 15 minutes—costs the average family only $4.00 a month — uses conventional service free gun type burner — connects to existing oil tank — uses the same #2 oil. Copper or glass lined tank — 30 and 45 gallon sizes.

Eligible for low FHA monthly terms.

GET ON THE PROFIT LINE—WITH THE SID HARVEY OIL FIRED WATER HEATER.

FREE SALES HELPS

This beautiful consumers piece printed in color is yours *FREE* with your name, address and telephone . . . . . *ASK FOR IT AT ANY SID HARVEY STORE*

Available in all 45 Sid Harvey Stores.

SID HARVEY INC.
VALLEY STREAM, NEW YORK

Announcing Something New

A NEW PLAN

FOR INCREASING YOUR RESIDENTIAL FUEL OIL BUSINESS

Without Increasing Your Cost

THIS NEW BUDGET PROTECTION PLAN

WILL ADD TO YOUR PRESTIGE
BUILD VALUABLE GOODWILL
ATTRACT MORE PROSPECTS
BRING IN NEW ACCOUNTS

At No Increase in Cost

To Your Present and Future Customers

YOU CAN GIVE THEM MORE FOR THEIR MONEY

(more than your competitors can give them)

HERE'S HOW YOU DO IT — YOU GIVE THEM A BUDGET CONTRACT WHICH IS FULLY INSURED. THEIR BUDGET PAYMENTS ARE CONTINUED IN EVENT OF SICKNESS, ACCIDENT OR DEATH

This entire plan can be effectively utilized for just a small portion of your present advertising appropriation.

WRITE OR PHONE

For Details including protected Dealers Areas Available

RELIANCE MUTUAL LIFE • Est. 1904
15 S. NORTHWEST HIGHWAY—PARKRIDGE, ILL.
PHONE TALCOTT 3-4164

American Standard launches modernization ad Campaign

A CONCENTRATED campaign to stimulate sales of heating and cooling products has been launched by the Plumbing and Heating Division, American Standard, New York.

Ads will be placed in trade and consumer magazines to back the 1957 Boiler-Maker effort. "Hard sell" newspaper ads will be placed in key papers throughout the country. The campaign will cover boilers, burners, radiation and airconditioning.

Point of sale displays and direct mail pieces have been designed for dealers. An action display is available which will fit on the top of the Acro-leader boiler. It features four-color scenes of installed baseboard and boilers.

Annual golf Tournament held by Burnham in Connecticut

MORE THAN 75 golfers and 135 dinner guests attended the 26th annual golf tournament held recently by Burnham Corp., Irvington, N. Y. The outing was held at the Tamarack Country Club in Greenwich, Conn.

Frank R. Brophy, J. R. Pearce, Fred Schoen and Al Hall were on the golf committee.

Shell newspaper Advertising highest among oil Companies

ACCORDING to the Bureau of Advertising, American Newspaper Publishers Association, Shell Oil Co. was top newspaper advertiser in its industry during 1956 with an expenditure of $4,215,509 an increase of 75% over its budget of 1955.

The company's ranking among all national advertisers in the medium is 17th. Ten other oil companies ranked among the top 100 advertisers last year. They were Standard of New Jersey, Socony-Mobil, Sun, Gulf, Standard of Indiana, Sinclair, Standard of California, Phillips, Texas Co., and Continental.

Control with DOLE®

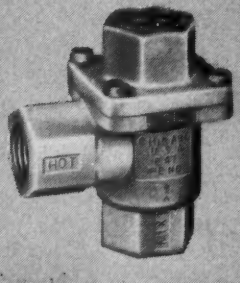
For automatically fired one-pipe steam systems

—Dole No. 1A Vari-Vent Air Valve

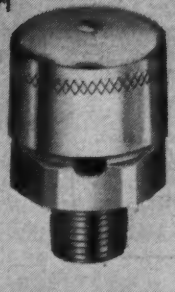
This popular valve has a rotating cam that provides an infinite number of venting speeds from fast to slow. Fits oil, gas or stoker fired one-pipe heating systems. Vari-Vent feature provides simple adjustment for equalizing steam to all radiators.

For information on this or other Dole Valves, call your jobber or write: THE DOLE VALVE COMPANY, Plumbing and Heating Division, 6201 Oakton Street, Morton Grove, Illinois (Chicago Suburb).

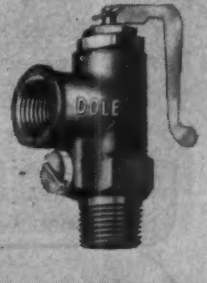
Dole Flow Control Valve



Dole No. 100 Water Mixer



Dole 20 SR. Air Vent



Dole Relief Valves

ACCURATE DEGREE DAY INFORMATION

Automatically Computed

The Johnson fuel demand meter indicates the net effect of sun—wind and temperature on fuel oil consumption. Smooth out your degree day deliveries!

WRITE:

Johnson Degree Day Systems

329 S. PITCHER ST. KALAMAZOO, MICH.

MURRAY Says:

You can't buy a better burner at any price—and only our price is competitive!

◄ Model TB

.75 to 3.0 Gph
One-Piece Cast
Aluminum Housing

Write or phone us for: Complete line of quality oilburners, sump pumps, circulators, and laundry tray pumps.

SILENT-FLAME
MANUFACTURING CO. INC.
Blue Point, L. I., N. Y. EM 3-6201

Citation from the U. S. Treasury Department was awarded Century Engineering Corp., Cedar Rapids, for outstanding achievement in a recent U. S. Savings Bond drive among Iowa industries. Century raised the number of employees enrolled in payroll savings to 75% and increased dollar value of their participation 520%. Above, L. P. Davis, left, Century's treasurer, receives award from King R. Palmer, state director, U. S. Savings Bond Division.

Air velocity instruction Manual issued by Illinois Testing Labs

A MANUAL of instructions on the Alnor Velometer has been issued by Illinois Testing Laboratories, Inc., Chicago. The booklet shows how the instrument can be used for measuring air velocities in open areas, at supply openings, at suction openings or inside ducts.

E. V. Coulter elected President and general Manager of Premier

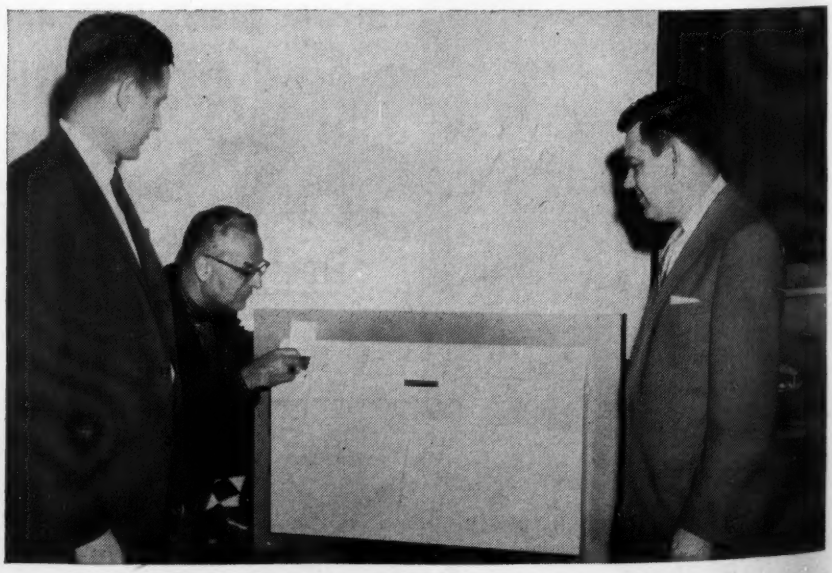
FOUR NEW OFFICERS have been elected by Premier Co., Minneapolis, manufacturer of commercial vacuum cleaning equipment. Elevated to the presidency was E. V. Coulter who was also named general manager. He succeeds the late Norman H. McRae.

Other officers are Gordon L. Bowman, vice-president, as well as general sales manager; William E. Westerdahl, secretary; and C. A. Halverson, Jr., treasurer.

Ever-Tite Coupling Co. opens Midwest Office in Cincinnati

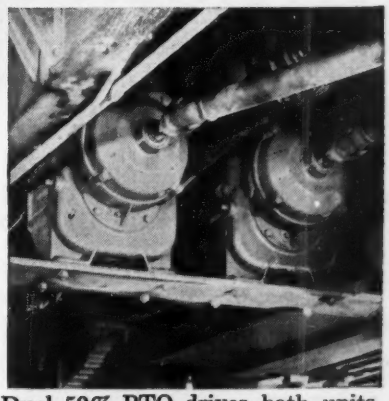
A MIDWESTERN OFFICE in Cincinnati, O., has been opened by Ever-Tite Coupling Co., Inc., New York. It will be located in the Carew Tower.

Roy W. Gronauer, midwestern sales manager and sales engineer, will have his headquarters here.

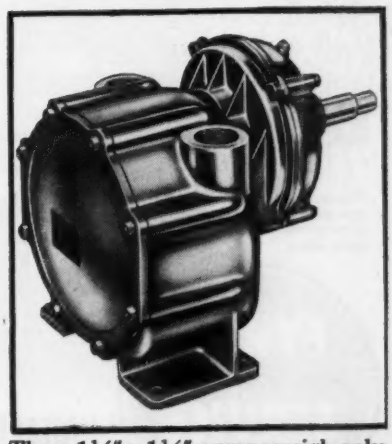


First sales meeting of the newly-consolidated Hydraline and York Divisions of Borg-Warner was held recently at York, Pa., with the new York-Hydraline airconditioner the center of attention. Above, J. P. Hawn, left, of Albany, N. Y., York-Hydraline sales agent, discusses the new conditioner with Victor Mayer, right, York-Hydraline sales manager, and J. Donald Smith, advertising and sales promotion manager.

Twin installation of Models 01½A-GL and 01½A-GR mounted on rack under tank on truck of James W. Tolbert, Waukesha, Pure Oil jobber.



Dual 59% PTO drives both units from 1956 Chevrolet truck engine.



These 1½" x 1½" pumps weigh only 32 lbs. each.

GORMAN-RUPP *CENTRIFUGAL PUMPS THAT PRIME* FOR

Faster Deliveries! Surer Performance!

WAUKESHA DEALER'S TRUCK DUAL-EQUIPPED WITH PTO UNITS

Time is of the essence in delivery of petroleum products. One extra truck trip per day can mean a large difference in profits. And equipment breakdowns can prove costly.

That is why so many are turning to Gorman-Rupp *Centrifugal Pumps That Prime.* These small, light weight pumps get the petroleum products delivered with top speed . . . and without loss of pay load caused by excess dead weight. Sturdily built, their design is simple. Owners are impressed with their trouble-free dependability. Sure, positive priming. Safer—no check valve.

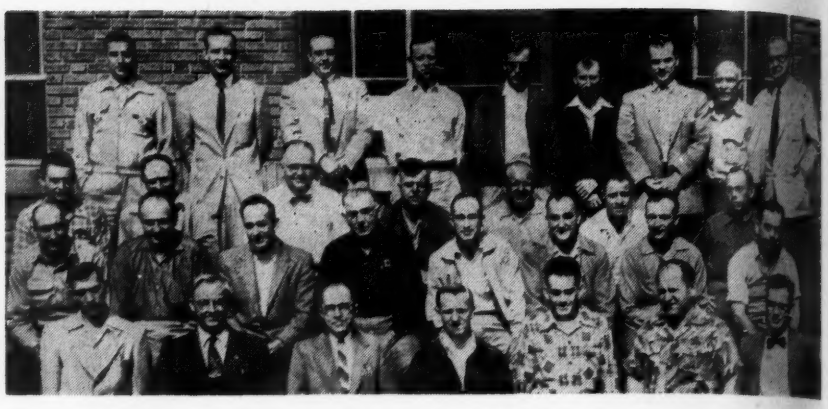
Gorman-Rupp PUMPS UNSURPASSED FOR PUMPING FAST

Ask your Gorman-Rupp Distributor for a demonstration.

THE GORMAN-RUPP COMPANY

305 Bowman Street • Mansfield, Ohio

The Oil Heat Institute of Harrisburg, Pa., sponsored two sessions of the Boston School of Advanced Oil Heat Training this spring. The home base of the school is in Lynn, Mass., and Ralph L. Dennis, president of the school, said that both sessions were very successful. Pictured is one group of students made up of oilheating men from the area.



Nat'l-U. S. Booklet explains Heating and Airconditioning

A NEW BOOKLET for homeowners has been prepared by National-U. S. Radiator Corp., Johnstown, Pa. It interprets the fundamental principles of obtaining good heating and will be distributed through equipment dealers.

One of its functions is to aid dealers in moving better quality equipment in less time and with less frequent servicing. Thus, the homeowner will be able to answer many questions that the dealer, architect, and contractor are now explaining.

Penn Controls makes Changes in Philadelphia and Houston

C. PHILIP PESTOW has been appointed manager of the Philadelphia district office, Penn Controls, Inc., Goshen, Ind. He has been with the company since 1940.

Another appointment made by the company concerns the Houston, Texas, office where William P. Marshall has been named sales engineer.

Slant-Fin Radiator Corp. adds Space to manufacturing Area

AN ADJACENT BUILDING has been secured by Slant-Fin Radiator Corp., Richmond Hill, N. Y., to increase manufacturing space.

Melvin Dubin, company president, attributes the need for additional space chiefly to the new 3/4" baseboard radiators introduced less than a year ago.

Robert Barclay, Inc., purchases Carrondon Supply Co., Aurora

ROBERT BARCLAY, INC., Chicago, Ill., recently purchased the Carrondon Supply Co., Aurora. The company will be operated as a Barclay branch sales and warehouse with Robert Donohue as manager.

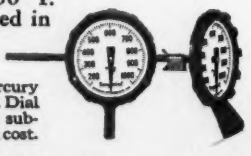
Barclay, Inc., is negotiating for the purchase of other supply companies and will establish new branches.

"Instrument check-ups open the doors to profitable equipment sales."

The FYRITE Combustion-Testing SERVICE KIT

. . QUALITY INSTRUMENTS that Pay for Themselves

The FYRITE Service Kit provides a complete set of accurate, quality-built combustion-testing instruments at the lowest cost. It includes the FYRITE CO_2 Indicator which is unsurpassed for fast, accurate flue gas analysis; and also contains the popular DRAFTRITE Draft Gauge and the 950° F. mercury Stack Thermometer, all packed in a sturdy steel instrument chest.



The chest is equipped with brackets for the mercury thermometer, and the TEMPOINT 200°-1000° F. Dial Thermometer shown at the right which may be substituted for the mercury thermometer at slight extra cost.

Ask your Jobber or Write for Bulletin 730

BACHARACH INDUSTRIAL INSTRUMENT CO.

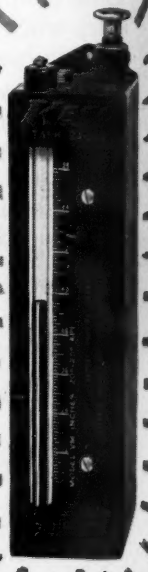
200 N. BRADDOCK AVENUE—PITTSBURGH 8, PENNA.

new!

KECO

Remote-Reading TANK GAUGE

For Oil and Gasoline



➡ Versatile!

➡ Attractively Priced!

➡ Economical to Handle!

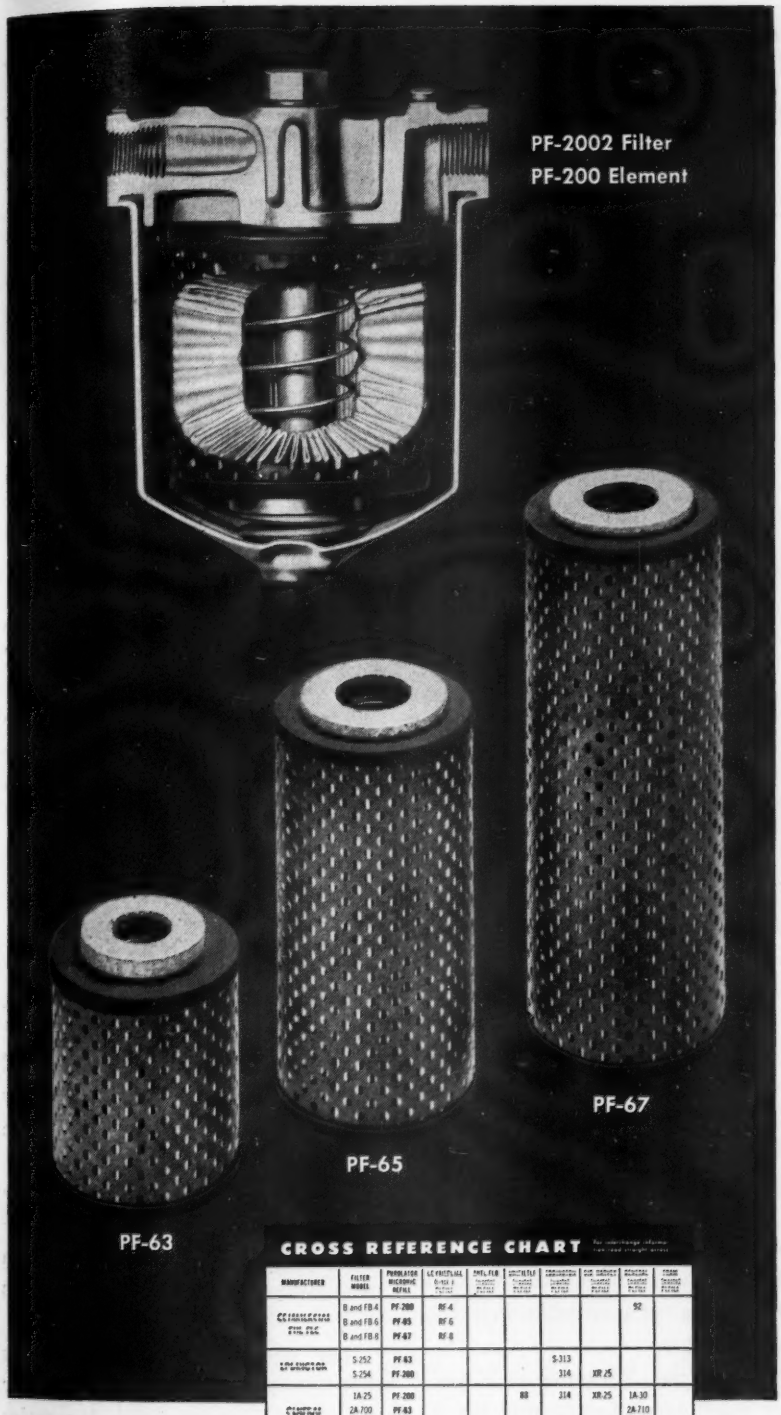
➡ Minimum Dealer Inventory!

FREE BULLETIN shows why the Keco gauge is a natural for users, distributors and dealers alike. Write Today!

KING ENGINEERING CORP.

Box 410 • Ann Arbor, Mich.

MANUFACTURERS OF GAUGING EQUIPMENT FOR OVER 30 YEARS



Reduce your inventory problems...

THESE 4 PUROLATOR REFILLS SERVICE 98% OF ALL OIL BURNER FILTER INSTALLATIONS

With the addition of three new sizes, the famous PurOlator line of Micronic® filter refills (including gaskets) will now fit 98% of all oil burner installations.

In addition to supplying most requests from a minimum stock of four sizes, you can give your customers the five outstanding benefits of PurOlator Micronic filtration—*no matter what filter is installed on their job.*

1. Water and acid resistant element.
2. Uniform density filtering to .0005".
3. No channeling or "soft" spots.
4. Will not shrink, distort, stretch, flake or deteriorate.
5. A guaranteed filtering capacity of over 100 gallons per hour U.L. approved.

CROSS REFERENCE CHART

MANUFACTURER	FILTER MODEL	PUROLATOR MICRONIC REFILL							
	B and FB-4 B and FB-6 B and FB-8	PF-200 PF-65 PF-67	RF-4 RF-6 RF-8					92	
	S-252 S-254	PF-63 PF-200				S-313 314	XR-25		
	1A-25 2A-700 2A-300	PF-200 PF-63			88	314	XR-25	1A-30 2A-710 2A-311	
PUROLATOR	PF-2002	PF-200						92	
	No. 77	PF-200		CF-300	88			1A-30	
	XF-25	PF-200		CF-300		314	XR-25	1A-30	
	F-300	PF-200*		CF-300	88				
	F-1110PL	PF-200*							C-1110PL

*Gasket Not Included

PUROLATOR REFILL FEATURES . . . .0005 DEGREE FILTRATION • ONE SIZE FOR ANY CAPACITY • U.L. APPROVED 100 G.P.H. • FIVE TIMES MORE FILTERING SURFACE AREA

This handy guide shows you, instantly, the filter refills which may be used, interchangeably, in all leading filter units.

PUROLATOR

PRODUCTS, INC.

"FIRST IN THE FIELD OF FILTERING"

Rahway, New Jersey and Toronto, Ontario, Canada

-MAIL COUPON FOR FREE CROSS-REFERENCE CHART-

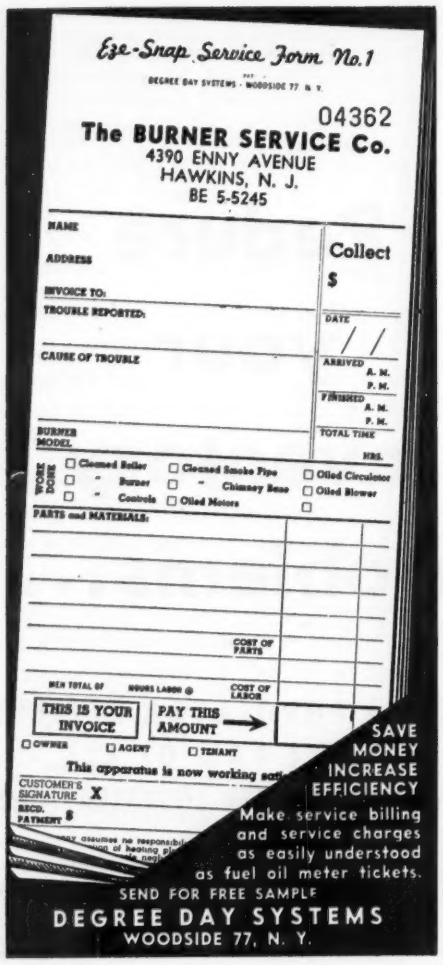
Purolator Products Co., Inc. OB-5
Rahway, New Jersey

Please send me _____ copies of your Oil Burner Filter Element Cross-Reference Chart.

Name_____

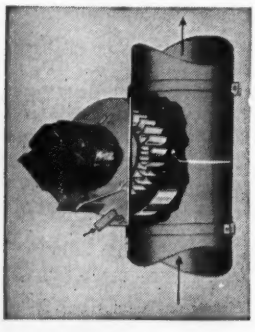
Address_____

City_____ Zone_____ State_____



NEED MORE DRAFT?

TJERNLUND "AUTODRAFT" INDUCERS



- Positive venturi action
- Simplified installation
- Heavy duty construction
- Installs vertically or horizontally
- Complete range of sizes
- Immediate delivery

Guaranteed Draft with "Auto-Draft"

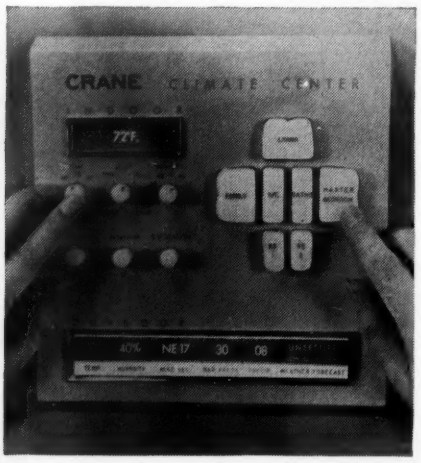
TJERNLUND MFG. CO.

2140 Kasota Ave., St. Paul 14, Minn.

Crane designs for comfort in 'House of the Future'

ENGINEERS and designers from Crane Co., Chicago, took a glance into 1975 and came up with a heating and air-conditioning plant for the Monsanto house of the future located near Disneyland in California.

A climate control center is the brain of the entire system and gives the family complete information and control of interior climate for each room of the house.



Also mounted on this 8" x 8" panel are controls for purifying the air, removing pollen, dust, germs and odors, and controlling air circulation in the house. This panel brings the family a complete picture of the weather outside including temperature, humidity, wind direction and velocity plus the current weather forecast. If the family wishes the scent of pine leaves, sea air or flowers—it's possible just by pushing a button.

Because of the difference in actual heating loads for a family and for a house on exhibition the panel is only a demonstration model. Components of the actual system are sized large to keep visitors comfortable.

The system makes use of the hollow plastic structural shells of the house for air distribution. Cooled or heated air is brought up through central core ducts, forced outward through the hollow ceiling in each room, then diffused into the room through perforations in the ceiling.

Cold air is returned through a grille in the end wall flowing back to the central core through the hollow floor sections of the plastic shell.

Worthington brings Climate Van to Architects Display Building

THE CLIMATE VAN, a motorized display, was premiered by Worthington Corp., Harrison, N. J., recently at the Built-In-Age Architects Display Building in Mountainside, N. J.

At the same time the public was invited to inspect the 3-zone heating and airconditioning equipment serving the building.

The van features the latest packaged equipment made by Worthington. It is mounted on a special truck; the pushing of a button causes the sides, roof and floor to expand to a width of 15 feet—almost twice normal traveling width.

The unit has a projection booth for the showing of motion pictures and slide films.

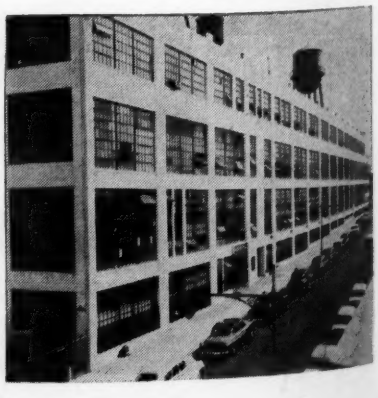
The Architects Display Building has permanent exhibits of building products and service used in the construction of residential, commercial and institutional building.

Neptune Meter Co. purchases CBS Factory on Long Island

NEPTUNE METER CO., New York manufacturer of measurement and control equipment, recently purchased a four-story, city block square, factory building formerly occupied by the Columbia Broadcasting System.

The building is located in Long Island City, N. Y., and is part of Neptune's expansion and diversification program started more than five years ago.

The new plan will provide more than 270,000 sq. ft. of interior floor area for manufacturing and operating activities. This space will be used by the Liquid Meter Division of the company.



The Postman is Busy These Days...

Delivering Copies of

"Better Oilheating"

ONLY
$2.00 A COPY

Oilheating men know a good thing when they see it and that's why they are buying copies of BETTER OILHEATING in quantities that will use up our supply faster than anticipated. If you haven't ordered your copy we suggest you do so at once!

This collection of articles from Fueloil & Oilheat and its predecessors, is without a doubt the most valuable ever put together under one cover. Take a look at the contents:

Fireboxes: First-rate Fireboxes; Facts about Fireboxes; Hot Flames.

Draft: Solving draft Problems.

Wiring: Locating wiring Defects; Handling electrical Trouble.

Motors: Keep 'em rolling (Parts I and II).

Controls: Principles of electric Relays; Motor-starting Relays; Electrical test Benches.

Nozzles: Handling nozzle Trouble; Bench Tests for Nozzles.

Baffles: Proper Baffles save Oil; More Heat per Gallon.

Pumps: Handling oil pumping Trouble; Service on two-stage Pumps; Service on automatic Valves; Service on pump Glands.

Efficiency: What CO_2 means; Brass Tacks of combustion Testing; What? No Instruments?; Know CO_2 from IOU; Five Ways to figure gph Rates; Effects of firing Rate on Cost.

Heating: Shortcuts to heat loss Data; It's all in the Venting.

Water Heating: Plenty of Water; Low-cost hot water.

Bound in attractive heavy paper cover, 8½" x 11". Over 100 text pages and 125 illustrations besides numbers of tables and short service hints.

No other book can give you so much for so little!

Order Your Copy Today.

fueloil & oil heat, 2 West 45th St., New York 36, N. Y.

Send your order to fueloil & oilheat
2 West 45th St. New York 36, N. Y.

Yes, Please send me ..... copies of Better Oilheating.
My remittance of $..... is enclosed.

Name .....

Company ..... Position .....

Address .....

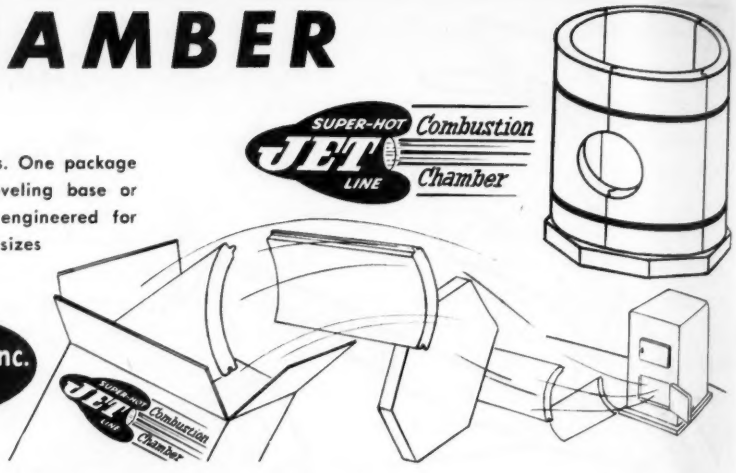
City ..... Zone .... State .....

FASTEST CHAMBER

FROM CARTON TO FIRING

So fast . . . so easy to install because there's fewer pieces. One package gives you everything you need including pre-cast self-leveling base or hearth. Designed with maximum combustion area . . . engineered for more complete fuel combustion—Immediate delivery . . . sizes 6/10 to 12 gallons per hour. Write for latest bulletin.

SUPER-HOT JET LINE Combustion Chamber

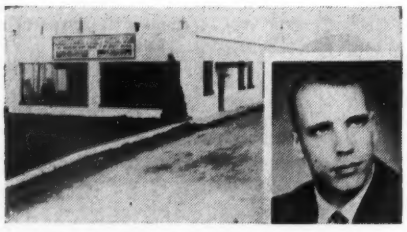


a product of Grant Wilson inc.
ASBESTOS and INSULATING MATERIALS

141 West Jackson Boulevard • Chicago 4, Illinois
SOLD ONLY THROUGH BETTER JOBBERS EVERYWHERE!

Iowa Manufacturer is licensed by DUC-PAC to make big Units

DUC-PAC, INC., East Longmeadow, Mass., has licensed Christians Sheet Metal Works, Spencer, Ia., to manufacturer DUC-PAC pre-fabricated trunk and stack duct.



Russell Swett, president, said that Christians has been licensed to make only the heavier units. The plant in Massachusetts will supply packaged fittings so that the complete line will be distributed to jobbers for resale in Iowa.

Finnish heating Employee wins Oil-O-Matic Fellowship

A FELLOWSHIP sponsored by the Williams Division, Eureka Williams Corp., Bloomington, Ill., has been awarded to Matti Ainamo, Finnish heating employee.

A judges panel representing Illinois, Indiana and Purdue Universities selected him over contest finalists from throughout the world. He will be entitled to a year of advanced study at one of the three universities.

Ainamo works for OY Petko Ab, leading fueloil distributor in Finland.

Honeywell promotes five Men to new administrative Posts

JAMES S. LOCKE, sales manager of the commercial division since 1946, has been promoted to manager of operations for the Minneapolis Division, Minneapolis-Honeywell Regulator Co.

Other appointments in the commercial division include: Ralph W. Crysler named manager of sales; Fred C. Brandt now manager of technical services; Jerome F. Cummiskey, assistant manager of sales; and Robert L. Mallory, manager of the Southwestern sales region.

Wall Poster with two Messages offered by McDonnell & Miller

A DOUBLE DUTY wall poster has been developed by McDonnell & Miller, Inc., Chicago, for heating dealers.

It contains a complete selling message on each side and measures 18" x 23". One side carries the headline "Anybody want to buy a cheap parachute?" and the copy advocates buying quality in all heating equipment as well as the McDonnell & Miller products. The other side has a discussion of medium pressure boiler jobs and what pump controls and make-up water feeders should be used.

❖

William S. Sutherland has been appointed advertising manager of Mueller Climatrol, a division of Worthington Corp. which will celebrate its 100th anniversary this year. Prior to joining Mueller Climatrol as assistant advertising manager in February, 1956, Sutherland was with the advertising department of Glove-Union, Inc., Milwaukee.

SINCE 1884

USED BY LEADING BOILER & FURNACE MANUFACTURERS

COMBUSTION CHAMBERS OF ALL DESIGNS
Time tested, low cost high performance combustion chambers.

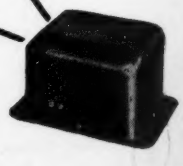
Call or write today!

KOLB REFRACTORIES CO.
MEADOW and JACKSON STS.
PHILADELPHIA 48, PENNSYLVANIA

NATIONAL REBUILTS ARE BEST

Wholesalers! you can depend on NATIONAL for
Acceptability
Experience
QUALITY
SERVICE

LET NATIONAL SOLVE YOUR TRANSFORMER EXCHANGE PROBLEMS



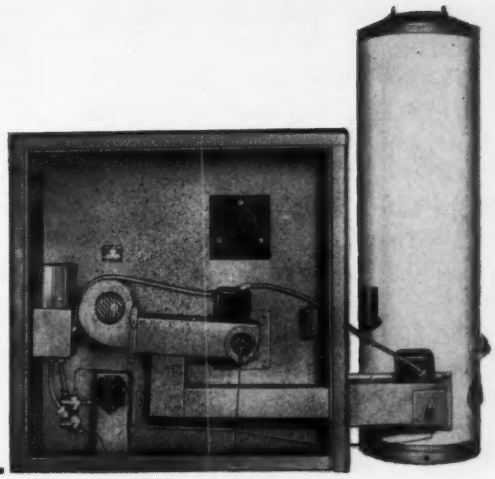
NATIONAL REBUILDERS
1027 GRAND ST., BROOKLYN 11, N. Y.

WALTHAM *Constant-Flow*

the FURNACE with

Year Round Domestic HOT WATER

The Big HIT of the Boston Show!



ONE ducted WALTHAM Jet-Head oilburner fires *both* units! Highly efficient. Long-life glass-lined tank. Excellent recovery rate: 120 gal. per hr. at 100° rise. Get full facts Now!

WALTHAM OIL BURNER CO. Inc. East Boston, Mass.

Readers' Problems

(*Begins on page 82*)

Q. For the past ten years I have been a subscriber of FUELOIL & OIL HEAT. *It has helped me many times increasing my knowledge of oilfired heating systems, but I have one gripe and know you can do something about it.*

During the past ten years, a number of different, new combustion heads appeared on the market. Every dealer installing one particular make has different ideas regarding round or square fireboxes, suitability for certain steel furnaces, suitability for warm-air furnaces.

Please try to have the manufacturers give more detailed information concerning their products. For oilburners, I need information on air patterns and which types of nozzles to use. The information we have been getting is wonderful for the Do-It-Yourself man but not for the trade. Also it takes as long as two months for us to get information from manufacturers after we request it.

G. D. E., Garfield, N. J.

A. Your idea of putting Do-It-Yourselfers into one class, and putting professional oilburner men into another class is excellent, and can be used in answering your combustion-head questions.

Discussing application of this combustion head, avoid putting stock into the talk of Do-It-Yourself men; these are the men who do not use combustion-test instruments to evaluate combustion-head and firebox performance; these are the men who base their planning on old wives' tales, guess-and-by-golly, and superstition.

Discussing combustion, put stock in the opinions of men who use combustion-testing instruments in their everyday work. These men obtain numerical answers to problems in terms of readings of smoke, CO_2, draft, and stack temperature.

Of course you yourself, as a professional oilburner expert instead of a Do-It-Yourselfer, should evaluate carefully the performance of this particular combustion head on studied installation having furnaces, boilers, and fireboxes of different designs.

This point relates to efforts to arrive at clean, efficient combustion through giving attention to combustion-head and firebox design: Don't fail to provide your pressure burners with delayed-opening solenoid valves, installed in nozzle lines, on jobs where you are using the best combustion heads you can buy, and the best fireboxes you can build. For cleanest start-ups and shut-downs of pressure burners, you must use delayed-opening nozzle-line solenoid valves.

You want data on which type nozzle to use in each burner model. For $1 you can obtain the "Nozzle Guide" from the Wm. Steinen Mfg. Co., 43 Bruen St., Newark, N. J. This covers gph rates, nozzle angles, and nozzle-spray characteristics of hundreds of oilburners.

Q. We should like to use stainless steel fireboxes more extensively but

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lack general knowledge regarding them.

For one thing, there seems to be a question as to how much backing and what kind can be used between the back of the steel chamber and the boiler base.

You must back it up with something and yet of course the steel must be free to expand a small amount. Can the space be poured full of expanded mica pellets or filled with ordinary loose rock wool?

Must the steel have an air space behind it for cooling purposes or can the insulation come up against it?

We will appreciate any answers to or comments on these questions.

B. L. O., Madison, Wis.

A. The editors, as well as you, need detailed information which resulted from extensive laboratory and field tests of stainless steel fireboxes. If such information is received here as the result of publishing your questions, we will forward it to you. Data are needed in terms of firebox lengths and widths, and diameters, for different gph rates; data are needed in terms of gph rates related to suitable nozzle heights and side-wall heights. Facts are needed in terms of CO_2 and smoke readings resulting from using different firebox designs and dimensions, and in terms of operating temperatures of stainless steel fireboxes. We would like such data from suppliers of stainless steel fireboxes and material, and from furnace or boiler manufacturers using stainless steel chambers, who have made complete performance tests in the field and in their laboratories.

You state that the stainless steel firebox must be backed up with something, and you mention the use of expanded mica pellets or loose rock wool. Your statement carries weight, if you are thinking in terms of dry-base boilers and water heaters. You can overheat the base of one of these by failing to provide insulating material around the firebox.

In the fields of wet-base boilers and warm-air furnaces of design similar to that of wet-base boilers, certain design engineers believe that no fill-back or insulation is needed between stainless steel fireboxes and the boiler or furnace heating surfaces around them, and perhaps below them. An air space is found suitable. It eliminates paying for and installing the insulation, and leads to higher heat-transfer rates for the boiler or furnace surfaces near the fireboxes.

Having either air space or loosely packed insulation around the stainless steel firebox can produce a soot-production problem, in cases involving hot products of combustion or flame tips being chilled rapidly by coming into contact with relatively cool surfaces at the bottoms of boilers or furnaces. Chilling flame tips prematurely can produce soot. Design to avoid such chilling.

Using refractory firebox material suitable for extremely high temperatures, certain engineers use minimum dimensions for nozzle height and firebox diameter or length-and-width, aiming to make the fireboxes so small that if slightly smaller they would give trouble of oil impingement and carbon formation on walls and floor. That winds up with extremely small

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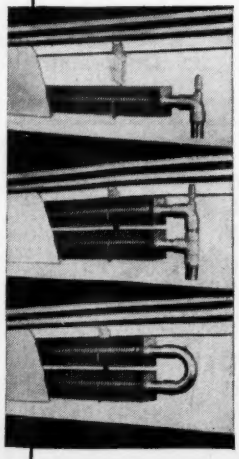

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WRITE FOR LITERATURE AND INSTALLATION DATA

fireboxes for burners which give exceedingly compact flames, thanks to the use of well-designed air-handling parts in the gun tubes of the burners; the firebox floors may have only 60 to 70 sq. in. of area for each one gallon-per-hour fired. Such exceptionally small firebox dimensions usually lead to overheating and short life for stainless steel fireboxes—particularly for stainless steel fireboxes having insulation for back-fill.

If you want to pour in back-fill of the insulating type which will set up and become hard, you can avoid the difficulty you mention regarding allowing for the expansion of the stainless steel—before you pour in the back-fill insulating material, put two layers of corrugated cardboard around the stainless steel firebox, in tight contact with it. The first firing of the boiler will burn away the cardboard, giving the space for expansion. Designing along those lines, and providing for both proper support and insulation under the firebox (with or without a small air space underneath) possibly will lead to the best kind of stainless steel firebox you can make, if you arrive by test at the correct firebox dimensions for the firing rate and the make and model of burner (to insure firebox operating temperatures neither too low for excellent combustion nor too high for long life of the firebox) but of course will run up firebox costs greatly and so will eliminate low cost as one of the big incentives for using stainless steel for the firebox in the first place. It may also result in higher shipping weight, whereas the light weight of stainless steel fireboxes, of the usual designs, also is one of their great advantages.

You may obtain help in this from your supplier of stainless steel for fireboxes, but you will have to do most of the design and development work involved in producing a highly practical, highly efficient stainless steel firebox for a particular model boiler.

Q. An oilburner book states that the over-fire and smokepipe draft readings should be taken after the burner has been stopped and whilst the plant is at maximum temperature.

In our opinion this could lead to error as two chimneys of identical dimensions, but one straight and the other badly shaped, could give identical draft readings taken under the above method as draft depends only on height and difference in temperature.

With the burners working however, widely different readings would be obtained due to the resistance to flow of the gases in the case of the badly constructed chimney.

This would indicate that the readings should be taken whilst the burner is working. We would be very grateful for your comments on this and for any advice you could give us regarding the method of taking draft readings.

Y. N. & Co., Ltd., Liverpool

A. You are correct in every detail. In addition to what you say, the effect of under-firing or over-firing a chimney would not be indicated by draft tests made with a burner idle.

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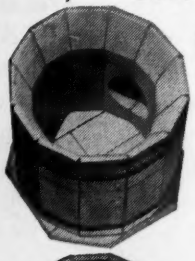

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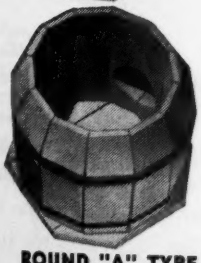

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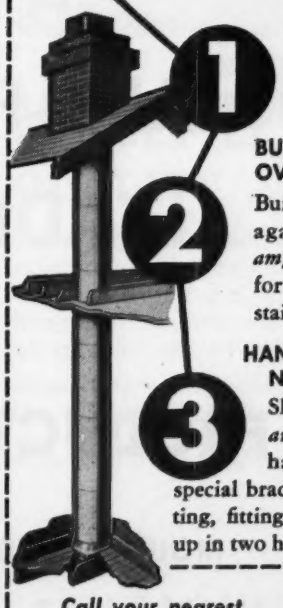

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burner firing 1.50 gph, and (b) increasing the firing rate of this burner to 5.0 gph and obtaining an over-fire draft reading of plus .05" instead. Thus the draft test made with the burner running takes into account numerically the ability of the chimney to provide draft for the products of combustion given by a flame of a certain gph size. But draft readings taken with the burner idle do not take into account whether or not the chimney is large enough for the flame size the burner produces.

Our book "Installing the Domestic Oilburner" is available for $2. On p. 51, it reads: "Usually the over-fire and smokepipe draft readings may be taken quickly, after the burner has been running 10 or 15 minutes following a cold start."

Q. If we use 1000 to 1200 operating hours for an oilburner per season, how do we determine the number of hours per year for motors of hot-water circulators and forced-air blowers?

P. M. J., Bristol, R. I.

A. In different heating systems, the motors you ask about run greatly different numbers of hours per year.

On an extremely cold day, the circulator motor of a hot-water system will run only eight to ten hours, if the boiler temperature is high when the boiler carries its heating load, and if the house has radiators which are oversize for its Btu heat loss. But at the other extreme, the circulator motor will run almost continuously on an extremely cold day, if the boiler temperature is relatively low (say 160°F.) or if the rooms have barely enough radiation for their heat losses.

Following the advice of warm-air heating experts, you set up a forced-air system so that its blower motor runs continuously during the day when the outside temperature is below about 40°F. That gives the advantage of "continuous air circulation." Obviously it also causes the blower motor to run many hours per day and per year compared to the oilburner motor.

Because different heating systems are greatly different in operation, no thumb rules can answer your question. You can obtain numbers yourself by studying forced-air and forced-circulation hot-water systems which you believe are typical. On each of these jobs, wire a self-starting electric clock in parallel with the motor of the hot-water circulator or warm-air blower. Set the hands at 12 o'clock. Return and read the hands in precisely 24 hours. You'll learn how many hours and minutes the motor ran in the last 24 hours.

As you are a steady reader of FO&OH, probably you have seen full details of this procedure in past issues. Take outside temperature into consideration, of course. For comparison, at the same time determine the length of time the burner motor runs in 24 hours.

Q. Some 25 years ago a 2,000-gallon tank was installed for an oilburner heating a new home. As the tank was beneath what later would be an extensive foundation planting, the fill

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pipe extended beyond this planting area. An oil-tank gage was installed in the basement on the suction line. This gage was designed to give a reading with the burner running. Knowing this, the owner kept an eye on it and ordered oil whenever down to 500 gallons.

Four years ago this old gage folded up and quit. Since then our drivers have found it necessary to fill by going by the sound at the vent. This "system" resulted of course in an occasional spill.

The manufacture of the old gage has long since been discontinued, and the old gage can't be repaired. We can't dig down to the tank and install a modern hydrostatic or float-type gage without ruining valuable plantings of evergreen which now are extremely large.

Do you know of a manufacturer now making a gage of the same type as the original suction-line gage? I haven't seen anything of this sort in recent years. Your suggestions will be gratefully received.

B. J. A., St. Louis, Mo.

A. According to a specialty-house catalog I'm looking at, the Teesdale Fuelgage Suction-Line Gage still is made. Of 3½" diameter, it is precisely the type of vacuum-indicating gage you need to replace the broken gage. You should be able to obtain one for less than $6 by looking through oilburner specialty catalogues or making inquiries at local supply houses handling oilburner equipment.

This will help you if you cannot obtain one of the above-named gages easily. Arrange with the owner to have him run out of oil so that the gage can be calibrated. Install suction-line tank gage of the type named earlier, or install a vacuum gage which reads zero to 30" vacuum—preferably having a large and easy-to-read dial. The job is out of oil. Now deliver the minimum amount of oil that permits you to start the burner and run it normally. That may be 50 gallons or more for this 2,000-gallon tank. With the burner running normally, the vacuum-operated gage in the suction line will give the reading that warns the tank is practically out of oil.

If this gage is an ordinary vacuum gage, remove its rim and glass—and using nail polish or something similarly both clear and convenient to apply, mark the gage at the number that warns the tank is practically empty. Instruct the owner to order fueloil before the gage reading becomes as high as you marked it.

You can calibrate a special suction-line tank-gage the same way. Make it read "Empty" when the tank contains only a few gallons of fueloil.

An ordinary vacuum gage will give a certain reading also when the tank is full—with the burner running, of course. After filling the tank, you can mark the "Full" spot on the gage also; then in-between gage readings will be more meaningful to the owner, for they will permit him to gage ¼, ½, ¾ full and so on.

A special suction-line tank-gage can be checked similarly to make certain it reads "Full" when the tank actually is full.

All gages which indicate level of oil in storage tanks on the basis of suction-line vacuum use the principle that

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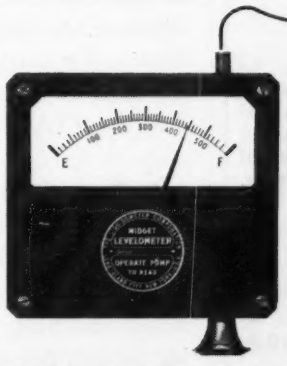

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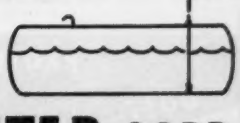

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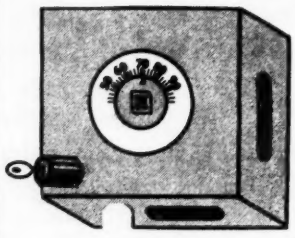

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the pump in the burner must work harder and harder, develop higher and higher vacuum, as the level of oil in the tank becomes lower and lower. After jobs equipped with such gages run out of fueloil, the gages fail to work because running the burners' pumps draw in air, not oil, from the tanks.

Q. We have a noise problem on an oilburner installation with overhead supply and return lines. The noise is a hum and a gushing sound of moving oil that we have not been able to eliminate. An anti-hum valve is not a solution for this particular job. Any comment on this will be appreciated.
C. W. R., Harrisburg, Va.

A. According to actual experiences in the field, these greatly different remedies have ended such trouble:

1—Switch to a different make and model fuel unit, perhaps thus reducing the gph flow-rates of the oil lines.

2—On an inside tank job, install a "tail pipe" for the return line. That is, run the return line to within about two inches of the bottom of the tank, making it like the suction line.

3—At the fuel unit, provide a "pigtail" for the suction line and the return line. Make each "pigtail" of an 18" loop of ¼" OD copper tubing. The oil flowing to the fuel unit goes through the suction-line "pigtail" just before entering the fuel unit. The oil leaving the fuel unit goes out through the "pigtail" before entering the present return line.

4—If the fuel unit is oversize with respect to the gph rate of the nozzle being used, and if the blower of the burner is large enough to permit this, switch from standard motor speed of 1750 rpm to "slow speed" motor speed of 1125 rpm by using a different motor. Because it quiets burners greatly, in bygone years this idea was used regularly by dealers and servicemen willing to do extra work to attain unusually good burner operation. You may have to ask the burner manufacturer, or your local motor specialist, to provide the special "slow speed" motor—full-load shaft speed about 1125 or 1140 rpm.

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(*Begins on page 58*)

source which provides both heating and cooling equipment. This holds true for any cooling equipment produced by manufacturers of hot water systems.

Chilled Water Central Units

One of the newer types of separate cooling systems for residences is the chilled water central unit.

In this system, the mechanical refrigeration apparatus is not an integral part of the room cooling unit, but located remotely in the water chiller. The water chiller may be located alongside the boiler as in a combination system.

Chilled water from the water chiller is pumped by a circulator through small insulated pipes to a compact fan-coil unit, located in a dropped ceiling plenum. The fan-coil unit consists of a coil through which the chilled water passes, a fan and motor assembly for circulating the air, and a drain pan to collect the moisture removed from the air. This condensate is directed into the waste line by a length of tubing. All components of the fan-coil unit are enclosed in a metal casing.

Piping for a separate chilled water cooling system should be according to standard practices. Piping is similar to that required for combination heating-cooling systems, except that no connection is made to the hot water supply. Naturally, piping must be insulated to prevent condensation and a loss of cooling power.

The fan-coil unit of the chilled water system, like the self-contained central unit, is installed in a centrally-located dropped ceiling plenum with cooled air shuttled to surrounding rooms through high wall registers.

The self-contained central unit, with integral refrigeration equipment, may be most suitable for small, one-story dwellings. A singular advantage of the chilled water system is that less bulky fan-coil units can be located in different areas or on different floors and operate off one remotely-located refrigeration unit—the water chiller.

In this respect, larger or rambling houses may be more economically cooled with a chilled water system. Zoning can also be accomplished in each area having a fan-coil unit, and with refrigeration apparatus in only one location.

For proper distribution of air, the fan-coil unit, plenum and registers must be sized correctly, just as the respective elements of self-contained central system must be sized. Here again, the manufacturer is the best source for information and assistance.

Calculating Cooling Loads

Calculation of residential cooling loads is quite similar to calculation of heat losses.

A guide has been published by the Institute of Boiler and Radiator Mfrs. to simplify the calculation process. This I-B-R publication is titled Cooling Load Calculation Guide C-30.

Anyone familiar with the I-B-R method of calculating heat losses can easily follow the method of calculating cooling loads outlined in Guide C-30. Cooling load calculation does, how-

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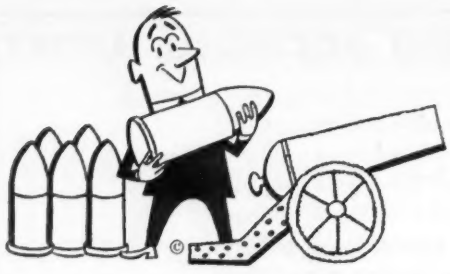

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